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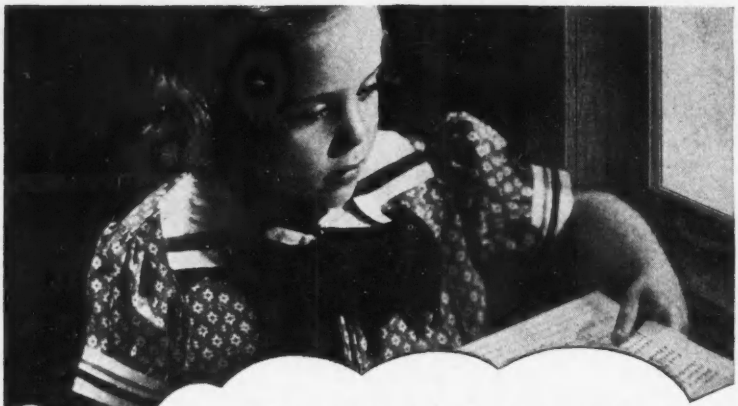

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JOURNAL OF THE
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ADMINISTRATION OF THE DIETARY DEPARTMENT[1]

MARY M. HARRINGTON
Harper Hospital, Detroit

THE administration of the dietary department is dependent upon an interpretation of its functions and the development of administrative technics and routines which will ensure high quality production and accurate data for evaluation of expenditures.

The dietary department has three major responsibilities: administrative, therapeutic and educational. These three obligations must be coordinated smoothly with all other departments to function for the good of the hospital, and it must always be remembered that the hospital functions for the care of the patient. This unit of the hospital must conform not only to the highest standards of the business world but to those of all professional groups concerned.

The therapeutic responsibility is directly concerned with the professional care of the patient; it extends not only to modifications of the normal diet as prescribed by the physician, but to the nutritional state of every patient and equally to the personnel. The nutritional value of either patients' or house menus must not be sacrificed to lessen the food costs. Even if the responsibility for food selection is placed entirely on the personnel as is the policy of the "pay services," the food quantities purchased can be analyzed and compared with the accepted standards as a check and an educational program can be planned to stimulate better food selection.

The educational responsibility extends to the patient, the nurse, the student dietitian, the intern and all interested allied groups in the community. Close contact with the physician is essential to accomplish the objectives as outlined under the therapeutic and educational responsibilities. The dietitian is an agent of the institution in carrying out a part of its educational program.

There are three types of departmental organization: the line, the staff and a combination of the line and staff. In the first, the authority invested in the director continues through the heads of the various departments and thence to the minor groups. Such an organization is economical, provides definite instructions, but is apt to be inflexible because all decisions are made by the

[1] Read before the Kentucky Dietetic Association, Louisville, April 6, 1940.

administrator whose training and experience may not have given her a thorough understanding of special problems. The line type of organization makes a sharp demarcation in a department as small as this, and places some of the personnel too far from the head of the division whereby the value of their viewpoint and experience is lost. The staff organization gives authority to the assistants on a functional basis and demands no responsibility outside their special fields. This type of organization does not provide lines of authority sharp enough for good administration; it may lack discipline and is dependent on close cooperation and understanding. A combination of the line and staff plan is particularly appropriate to the dietary department with its close associations. This system permits administrative problems to be solved by the person especially qualified and therapeutic decisions to be made by the dietitian who is entirely familiar with the problems involved. All staff dietitians are on a par as heads of their divisions; they act as advisers to the director of the department and each has an important contribution in the formulating of staff policies and an obligation in teaching and contributing to the advancement of the department and the profession.

THE BUDGET

The dietitian should have a definite working budget and know the exact operating expense of her department. Some hospitals do not require the dietitian to operate on a budget or to develop an efficient food control. Even if such a demand is not made, it is the responsibility of every dietitian to know the distribution of the money spent by her division if she is to evaluate her own ability and improve her organization. The dietary department spends a large portion of the hospital dollar and small wastes can soon swell into hundreds of dollars. Good food control forces the dietitian to keep in touch with new developments in administration and results in large savings. It also affords an opportunity to show the accomplishments of efficient business management.

An experienced and successful hospital administrator says that every order and policy should cross his desk each day. All policies should be centralized but unnecessary details are time-consuming and therefore insufficient time remains for the broader supervision and analysis. The department head should be in close touch with the various hospital groups and should be able to observe the working policies of the institution as a whole and not be overwhelmed by the details of her department. She should take every opportunity to note the reactions toward her department and such reactions should be carefully evaluated if she is to improve routines. A complaint book in every unit is an invaluable aid in the elimination of unjustified comments and not infrequently chronic complainers may be traced in this way. Close and daily contact with supervisors conduces to improved service and satisfaction of all concerned.

The centralized type of organization permits a direct control of food to the consumer, eliminates duplication of effort, and waste can be more carefully controlled. However, it is important that all members of the staff have a clear picture of the organization if misunderstandings are to be prevented and a delineation of policies clearly defined.

Such a type of organization is expressed in centralization of all the various duties as much as possible, and provides channels for the direction of new problems.

A physical plant which has been originally planned for centralized preparation and service is most desirable. The majority of the larger hospitals, however, merely have modifications of a true central service. Preparation of food may be performed in one place even though the service of food is distributed through various unit kitchens. There are hospitals having several kitchens in which food is prepared for private patients, nurses, interns and guests. Operation of so many preparation units can often be eliminated with no detriment to food standards and at marked reduction in effort and cost. A simple example is a salad room close to the source of supply of raw food where uniformity of production, standardized portions and all supplies for this preparation are concentrated. A smaller number of trained personnel is needed and all left-overs and waste can be more closely supervised and used. The problem of transportation is no greater than that of distributing the materials to each unit kitchen for preparation.

CENTRALIZED SERVICE

The advantages of a centralized plan of food preparation and service are as follows:

Less floor space necessary for the production and service units.

Less duplication of expensive equipment.

Better supervision and fewer personnel required.

Direct control of the completed tray to the patient permits greater satisfaction and economy in food costs.

Centralization of left-overs and elimination of the return of many small quantities of food which have been handled considerably.

Closer control on dishes, silver and other expensive articles of equipment for tray service.

Standardization of serving portions and efficient food control.

The disadvantages of central service often noted by advocates of the decentralized system are:

Such a system is valuable only in a new building as the installation of lifts and other equipment is costly. (This statement should be carefully analyzed as the extra equipment and personnel for a decentralized system may be more costly over a long period of time.)

Food becomes cold if nurses and ward maids do not cooperate. (This is also true with regard to service from floor unit kitchens if distribution of trays is entirely dependent upon the floor staff and they fail to cooperate satisfactorily.)

Slower method of service. (Time studies will show this is not a serious consideration.)

Experience with both types of service has shown that the disadvantages noted above are minor and have been offset in many hospitals which favor the centralized plan. This type of service lends itself particularly well to the newer plan for feeding personnel in pay cafeterias because it permits a better food control.

MENU PLANNING

The master menu should be planned by the administrative dietitian who is

responsible for its preparation and cost. This menu should be planned for the patients and all other menus based upon this, with as many of the same foods used as possible in order to reduce the variety of foods prepared. The therapeutic diets should also follow the master menu, using only a few substitutions where necessary. If the selective menu is not used for patients, a definite list of substitutions can be planned each day to be used by the various dietitians if, after patient contact, changes in the menu are necessary. The wide variety of foods on the private and ward menus forms the nucleus of the cafeteria menus and the manager can plan the supplementary foods as she is closest to the consumer and the best judge of popularity.

FOOD PREPARATION

Preparation of all food in the main kitchen is very desirable to assure uniformity of production under skilled personnel. If production is being carried on in unit kitchens, either the number of skilled employees is duplicated or the quality of the food suffers. Centralized production eliminates the necessity of carrying any quantity of supplies in the unit kitchens where only a very few short orders need to be cooked. In this way all food remains in the central kitchen for supervision and there is less chance of waste or loss.

FOOD SERVICE

It is the aim of every dietitian to serve food at the proper temperature and in an attractive and palatable manner. Final supervision of the completed tray is the surest way of accomplishing this aim. Service may be from unit kitchens on the same floor as the main kitchen or from floor kitchens. In either instance the food can be served hot from the main kitchen and put into steam tables or heated carts for distribution. It takes more food to serve 200 trays from numerous floor kitchens than from one, and the amount of returned food is greater. The number and size of servings can be carefully controlled and the used food does not suffer too much from handling. If the completed trays are served from a minimum of unit kitchens, it is unnecessary to have other food available on the floors and no food needs to be sent to the floor except on a written order for a specific patient.

FOOD COSTS

Food costs are dependent upon the type of service offered by the institution and the standards maintained. Comparisons of costs with other institutions are not particularly helpful as there are so many variables to be considered. However, checking costs against the previous year and against the market variations helps to evaluate weaknesses in planning. Careful buying and efficient food control are the best means of regulating costs. Good food need not be expensive food, but a cheap quality of food is expensive because of the diminished yield often obtained. Recently a dietitian was dismissed from an institution after a short period. Upon investigation, the management said that she was very capable and efficient but her food costs were too high. It developed that the food standards desired by the hospital for its clientele were not so high as those of the dietitian. The difficulty could have been prevented

by the director if a budget had been given the dietitian. Likewise, the dietitian could have ascertained the food habits of that community and planned accordingly.

An elaborate system of obtaining food costs is unnecessary and the use of expensive forms and personnel may cost more than the information is worth. However, complete records of the expenditures of the dietary department will furnish the data for the establishment of a budget to anticipate the yearly costs and provide for replacements and improvements. The department should have its own accounting records but the final monthly statement should come from the business office and serve as a check against the departmental records. It might seem as if this were a duplication of effort but unless daily records are kept the trend in costs will not be known until too late to be corrected in that particular month.

Sometimes it would seem that more detailed records would furnish enough complete and helpful information to be worth the time spent in obtaining this. A way should be provided to secure a sampling of this desired information from time to time. Certain fundamental records are necessary and the forms used for these can be very simple and thus minimize the work of record keeping and at the same time provide complete, concise data. The records which are valuable for study and require no additional effort are as follows:

1. The purchase order should specify the amount, quality and weight of article and can be used to check the goods received. Recording of the type of pack and weight can be used to yield valuable information. (Notation on orders for hampers of green beans showed a variation in weight of 22 lb. which could have been corrected if there had been a definite agreement with the produce company on specifications.)
2. Stores stock record should provide the quality of goods received, quantity used, amount on hand and the unit cost. This perpetual inventory furnishes the costs of food used each day and is an accurate guide for future orders.
3. Daily record of meals served must be as accurate as possible to derive the average cost of raw food per meal. The meal count in the dining room can be determined on the basis of plate count. The record of meals served to patients should list the number served to ward and private patients. A more detailed census might note the number of fluid, soft and special diets if it seems important to study the cost of these diets.
4. The daily expenditure in a small hospital may be ascertained by determining the total money charged on bills, plus the store-room withdrawals, and divided by the number of meals served. This will give the raw food cost per meal. If an accumulative total of each is kept for the month, a fairly close prediction of food costs is obtained with little effort. In the larger institution, this daily cost sheet showing the total food charges made to the department and their distribution may be compiled by the purchasing department and sent to the dietary department daily.
5. Standardization of recipes furnishes a definite control of quality and

yield. These tested recipes should specify the number of serving portions and the unit cost. Many institutions prefer to standardize their own recipes, but a very fine book of tested recipes has been compiled by the Administrative Section of the American Dietetic Association and can be purchased. However, the unit cost of these recipes must be determined by the institution at regular intervals. A marked fluctuation in the price of butter and eggs may make considerable difference in the cost of a portion.

6. Serving portions of all foods should be standardized to ensure uniformity in yield and service. A list of specifications can be made for each serving kitchen and the size of the portions can also be controlled by selecting dishes of the proper size. (A four-ounce cream pitcher will not control a two-ounce serving of cream as effectively as a two-ounce pitcher.)

   Meat, if cut, should be purchased on the basis of the number and weight of servings per pound. If meat is cut at the hospital, effective machines can be purchased to control the size of portions. A new meat cutter, recently purchased, has increased the yield of chops and raw ham by 20–25 per cent and will save its cost in a few months. Not only is the saving important but the uniformity in appearance is desirable.

7. Payroll provides a permanent record of the details of all salaries paid by the department; the number of employees and the days worked by each employee. This record furnishes valuable information as to the number of employees necessary, the number of absences of a particular employee and other irregularities. Overtime will be evident from this record, but as a matter of policy it is undesirable and can be avoided with proper planning. Overtime produces wage problems and dissatisfaction among employees.

8. Miscellaneous expenditures should be maintained as a separate record for study. Since dishes and silver constitute the largest item, records should be kept in such a way that an analysis will show the source of the greatest breakage and the kind of article replaced most frequently. Miscellaneous supplies and replacements do not constitute a large item of expense and need not be kept with such detail.

9. Income of the department is often overlooked and instead of being credited directly is included in miscellaneous earnings of the hospital. The food and service is charged against the department for guest trays, but a credit is not always given. The dietary department has many opportunities of adding to the hospital income through special luncheons, dinners and guest trays. It has become a general policy to charge for all food for these functions and to debit the department for the cost of food and payroll and credit it for the income from such sources. Such a charge should also be made against the school of nursing to give an accurate picture of the expense incurred and service rendered. Income should list miscellaneous sale of food, guest trays and special functions.

10. Monthly cost and expense statement may be very simply compiled but should list the following: (a) Food Inventory; (b) Food Pur-

chases; (c) Total Cost of Food Used; (d) Total Meals Served; (e) Raw Food Cost per Meal; (f) Payroll; (g) Miscellaneous Expenses; (h) Per cent of General Administrative Expense; (i) Fuel and Maintenance; (j) Replacements; and (k) Depreciation. The total expense of Payroll, Miscellaneous Expenses, Per cent of General Administrative Expense, Fuel and Maintenance, Replacements and Depreciation, divided by the total number of meals served, equals service cost per meal.

FOOD CONTROL

Definite specifications for all foods should be given to the purchasing department or followed by the dietitian who does the buying. All food orders from unit kitchens should clear through the administrative dietitian in order to control quantities and costs. Standardization of recipes and serving portions is very important; a small increase in the servings of meat will amount to hundreds of dollars in a short time.

The aim of food control is to maintain consistency in the quality and size of portions of food at a minimum cost. A well organized plan serves to reveal losses in yield, left-overs and other leaks which tend to raise food costs. Certain records may be kept daily which give the director of the department a control on the food being used, and a fair distribution of charges. If a 28-day menu schedule is maintained, the amount of the various commodities served per meal remains remarkably constant. Variations tend to show an increase in quantity rather than a decrease. (If the amount of beef per meal increases, an analysis will show an increase in serving portion or that left-over meat is not being used properly. The fact that the meat is not discarded does not mean economy unless such meat is used to replace a food of equal cost.) Sometimes this increase is due to a decrease in the number of meals being served and the fact that the food orders have not been decreased in quantity as quickly as the census falls. An increase in the quantity of potatoes used per meal, even though the serving portions remained constant, was soon noted when a different variety, resulting in more waste, was purchased.

Sales of prepared foods must be carefully controlled. Inter-departmental sales are priced at the cost of the prepared food plus 10 per cent and those to other departments at cost plus 15 per cent. This is a generally accepted method used by hotels and restaurants. In the pay cafeteria type of service, regulation of food cost can be checked daily on the per cent of the sales dollar. High class restaurants maintain this figure at 40 per cent of the sales dollar while school lunchrooms show figures that range as high as 60 per cent.

PERSONNEL MANAGEMENT

The selection and management of personnel is a serious responsibility. Employees should be hired on the basis of their skill and adaptability for the job. However, if an efficient department is to be maintained, each employee should be carefully trained in his work and not left to his own resources, to succeed or fail. Each employee should be given a written outline of his duties and sufficient supervision to help him learn to perform them satisfactorily. Continual changing of employees is

costly to the hospital and their careful selection and training is a real economy. Definite working hours and time off should be maintained and the plan of giving each employee a full day off each week is much more satisfactory than giving two afternoons, both from the satisfaction of the particular employee and the department. The idea of a planned wage scale and promotion to more interesting jobs is a desirable incentive even if the wages cannot be increased. We are all employees and every worker desires a feeling of security and appreciation. We should not forget that the lowest employee contributes in his own way as much to the successful operation of the institution as the one with more training and opportunities.

REFERENCES

MACEACHERN, M. T.: Hospital Organization and Management, Physicians Record Co., Chicago, 1935.

GILLAM, S. M.: The hospital dietary department, J. Am. Dietet. A., 3: 234, 1928.

HARRINGTON, M. M.: Translating food economics into simple terms of service, Mod. Hosp., 37: 77, 1931.

HARRINGTON, M. M.: Food service, The Canadian Hospital, 15: 18, 1938.

PARK, R. M.: Unification of administration and control of food service under the dietary department, Hospitals, 14: 98, 1940.

GILLAM, S. M.: Purchasing of food supplies for institutions, Bulletin of Texas State Dietetic Association, 2: 6, 1937.

MACLACHLAN, M. M.: A pay cafeteria, J. Am. Dietet. A., 4: 243, 1929.

HARRINGTON, M. M.: The pay cafeteria, J. Am. Dietet. A., 16: 55, 1940.

GILLAM, S. M.: Labor organization, labor turnover and food costs in the hospital dietary department for the year 1927–28, J. Am. Dietet. A., 4: 133, 1928.

AUGUSTINE, G. M.: Labor policies in hospitals, J. Am. Dietet. A., 14: 309, 1938.

MCKOWAN, A.: Setup for central service, Mod. Hosp., October 1938.

DUNLAP, M. A.: The organization of several dietary departments, J. Am. Dietet. A., 14: 705, 1938.

BACHMEYER, A. C.: An approach to the hospital personnel problem, J. Am. Dietet. A., 15: 345, 1939.

STEVENSON, C. S.: The ABC's of personnel, Factory Management and Maintenance, 97: 106, 1939.

SWEET, F.: Training to improve work, The Personnel Journal, 17: 109, 1938.

RADELL, N. H.: Accounting and Food Control, New York: F. S. Crofts Company, 1935.

WADE, H. H.: Fundamentals of Accounting, New York: John Wiley & Sons, Inc., 1934.

DAHL, J. O.: Kitchen Management, New York: Harper Bros., 1928.

Food Prices. GENERALLY SPEAKING, the price readjustment downward has run its course, and most of the staple groceries are again in a definite buying zone. While stocks of foodstuffs throughout the world are materially greater than was the case a quarter of a century ago at the beginning of World War No. 1, yet it stands to reason that European nations will be in need of heavy supplies by early 1941. Briefly, as time goes on, grocery products appear destined to work into a stronger position.—*McGill Commodity Service, Inc., Auburndale, Mass.: Price Trends in Hospital Commodities, Hospitals, July, 1940.*

THE DIETITIAN IN THE WORLD WAR

MARY PASCOE HUDDLESON

TWENTY-THREE years ago for the first time in history dietitians were assigned to duty in the Medical Department of the United States Army for base and field hospital service in time of war. Today the call has gone out again throughout the nation for the organization of hospital units similar to those formed during the first World War in which, according to the report of Lenna F. Cooper to the Surgeon General of the Army, 356 dietitians served—84 with the A.E.F. in France, England, and the Army of Occupation in Germany, and 272 in hospitals and canteens in this country. Apparently few of us who saw service with the A.E.F. in France have cared to write or speak of our wartime experiences. Perhaps we have been too oppressed by the horror of war, or perhaps we have felt, or hoped, that never again in our time would the need for such service arise.

If we take an objective point of view, we may look upon that wartime service as the period when the profession of the dietitian really had its beginning. For it was that same eager idealism which inspired those who went into Army service that also animated those who formed our Association in 1917.

It seems timely now to go over the road traveled by the dietitian in the first World War. For history is again repeating itself and the need arises for the rebirth of the spirit of service to our country. And now, as in 1917, the Red Cross is enrolling dietitians for wartime service. In 1917 these enrollments were under the guiding hand of a great nurse, Jane A. Delano. Later, Elva A. George was the first dietitian to be appointed director of the Red Cross Dietitian Service. Under this service prospective Army dietitians were enrolled and later assigned to duty under the Medical Department of the Army or in some capacity with the Red Cross. Then the need arose for someone to supervise the dietitians assigned to Army service, and Lenna F. Cooper, president of the American Dietetic Association in 1937–38, was appointed supervising dietitian in 1918 and assigned to duty in the Office of the Surgeon General of the Army at Washington.

Interesting sidelights on the Army dietitian's life and times appear in the *History of the American Red Cross.* Many of the comments are from those who went overseas in hospital units. The first to go over were Florence Bettman, Pennsylvania Hospital unit, and Anne Upham, Lakeside Hospital unit, on May 8, 1917, and Margery Hulsizer (Copher) who sailed from Boston with the Peter Bent Brigham Hospital unit on May 11, 1917.

I was enrolled in 1917, assigned to duty in February 1918, and sailed with what was then, I believe, the largest convoy of troops in the history of the world—all told about twenty shiploads. What followed seemed a motley mixture of events: Two encounters with submarines, one in mid-Atlantic, the other in the Irish Sea. Later, aboard an unlit train in France, creeping slowly

through the night; cheering young soldiers passing, going up the line; other units returning, dirty, war-torn, sightless, legless. My first job at Base 8, Savenay, turning out two to three hundred "light diets" with the help of two civilian Frenchwomen. Later, at Base 117 in the advanced sector, midway between G.H.Q. (General Pershing's headquarters at Chaumont) and Neufchateau in the upper Vosge mountains. And there—the smoky sheet-iron field ranges, the moldy meat, the rancid five-pound cans of butter, the hard-bitten mess sergeants, the erratic cooks and the shell-shocked personnel—if a pan clattered to the floor all would duck under the nearest table.

The bombing planes in battle formation overhead; the gas masks at the head of our beds. The occasional and blessedly quiet, brilliantly sunlit mornings, when the birds would sing in the nearby woods. And then the distant cannon would begin again their menacing roar and the birds would stop their singing.

The sound of the hob-nailed boots of the 26th Division going by all day and all night in a steady stream to the San Mihiel drive. Toul, with its fringe of heavy cannon looming up ominously at the sky through the camouflage of tree branches. Thiaucourt, immediately after the Armistice, with the German muskets where they had been dropped, the German signs still on the street corners, and a wavering line of returning refugees plodding homeward, back to their ruined homes. The shattered churches, now and then retaining the skeleton of their riddled structure as though upholding to the last their allegiance to God. And the bare and mutilated branches of the trees upraised against the sky, like some horrible symbol of the evil and futility of war.

Drama, yes, lightened at times by a fatalistic light-heartedness, but little room or place for anything else. In the light of all this the whole picture of service that the dietitian could offer can perhaps be but faintly delineated. We all did our best. And that little was well told at our second annual meeting in Cincinnati in 1919. Reading it over again, particularly the reports of Maude Perry and Mary Swope, the general impression is of tremendous efforts against the almost insurmountable handicaps overseas: One dietitian per two thousand bed base, tents for kitchens; little or no equipment—bottles for rolling pins, "G. I." (new garbage) cans for mixing bowls, a small fence post for mashing potatoes; and mess officers who knew little or nothing about food except when they sat down to the table. Interspersed are wails about the mud and the rain; the difficulties of transportation of foodstuffs; the desperately sick or wounded men and little that was suitable to feed them—no fresh milk, and eggs from $1.25 to $3.00 per dozen.

Hospitals which were on a direct line to the front often had supplies sent up on the ammunition trains. If the track ahead was clear they would shoot right through without stopping to unload food. Then for days the only supplies, perhaps, would be "goldfish", "corned willie", macaroni, canned tomatoes, sugar, corn-meal, and coffee—always coffee—I do not remember ever running out of that. And usually we had canned milk. Canned vegetables were corn,

peas, and tomatoes, never opened with a can-opener, always with a short Army knife, something like a dagger, and intended originally for purposes other than can-opening. For variety, we'd have "corned willie", macaroni and tomatoes on Monday, followed by tomatoes and macaroni, and "corned willie" on Tuesday. I had never known there were so many canned tomatoes in the world!

On returning from France in 1919 I was asked to speak at a meeting of the New York Association of Dietitians (now Greater New York Dietetic Association). The tomato and macaroni theme permeated my discussion, and I closed with a vocal outburst against a scheme of life that had almost drowned me in tomatoes. There was a pause, and then a tall, impressive-looking woman in the back of the room arose and in what to me was a chiding, sepulchral-like tone said: "Miss Pascoe, those tomatoes were included in the ration because of their vitamin C content." I shall never forget my shame and dismay! And so I learned about vitamin C from her, for I had had no opportunity to hear of the birth of vitamin C during my service in France. However, the event came too late to affect in any degree our rations of tomatoes in France. For just by chance, because tomatoes had been included as a "seasoning" or flavor component of the ration, were we saved from very probable cases of at least mild scurvy. Canned tomatoes, providentially, had been our only important source of vitamin C, and fortunately they were often eaten unheated.

During the war, the rations in our base hospital were computed according to the rules as outlined in the *Army Cooks Manual* published in 1916. Here tomatoes are listed as a seasoning component of the ration and there is no mention, of course, of any foods useful as antiscorbutics. As a matter of fact, there is little indication that nutritional studies disturbed to any extent the academic calm of the authors of the manual. The chief changes in the ration, through successive wars, have been as follows:

The basal portion, eighteen ounces of bread and twenty ounces of beef, dates from 1794 when the only other component with energy value was whiskey. In 1818, one-half pint of beans was added and whiskey was changed to molasses for making spruce beer. In 1832, liquors were eliminated entirely and coffee and sugar were substituted. In 1861, a pound of potatoes was added and beans were reduced. In 1898 canned tomatoes were added and none of the other components reduced. Other additions were prunes in 1901; and jam, evaporated milk, butter and lard in 1908. The ration as it stood in 1908 was practically the same as we had during the first World War.

The creation of a nutrition section under the Sanitary Corps, directed by Colonel John R. Murlin, came too late to affect the situation in France, so far as I was able to determine. I did not even know that this section existed until I returned to the States.

The dietitian was in a strange position during the World War. She went through a rigid physical examination before being accepted. She signed the oath of office and for the duration of the war she was subject to military discipline and orders. She enjoyed certain privileges of the Army personnel. In France

she traveled only under a military permit and on leave she received the extra sugar and bread allowances of "*militaires en permission.*" And crowning glory, a circular letter of the Chief Surgeon, A.E.F., dated June 1919, permitted one Army dietitian, at least, to wear an original and one additional Gold War Service Chevron signifying twelve months' service with the American Expeditionary Forces. But when she returned to the States only a superficial "cootie" (a polite and somewhat affectionate term for a small insect) and skin examination awaited her. Those who had been incapacitated in any way by their war service had only the Red Cross to turn to for help.

Not until the final notation appeared on my service record, at the time of discharge, did the term "civilian employee" appear. This designation appeared to come directly from the Secretary of War.

The anomalous status of the Army dietitian undoubtedly accounted for many of her difficulties in a situation entirely military. The executive status of the mess officer and mess sergeant remained the same with the coming of the dietitian, yet these were her duties, as stated in G. H. Q. Circular No. 27, dated May 1918:

> Dietitians are trained experts in nutrition and food preparation. If not trained nurses, they are civilian employees having a status analogous to that of a trained nurse. The function of the dietitian is to supervise the preparation not only of special diets, but to make out the bills of fare and supervise the preparation of all food furnished by the government. The dietitian has expert knowledge of which the Commanding Officer should make the fullest use for the benefit of his command. She should be able to relieve the mess officer from the burden of details required to secure a well balanced ration, proper variety and preparation, and a good service. The mess officer should make a daily inspection, accompanied by the dietitian and mess sergeant, to see that the details of a good service are carried out fully and completely.

The net result of all this was practically nil. For how could the dietitian supervise, lacking authority to give orders? She could use wile and guile persuading the mess sergeant to carry out her wishes, a nerve racking, energy dissipating procedure, or she could finally seclude herself in some niche and cook. Only thus could she be assured that at least the "light diets" would be edible. Or, since she was subject only to the orders of the commanding officer, she could have initiated a one-woman spy system, and having peered through a mess window or door and observed the stew burning and the cook and kitchen police playing poker, she could have rushed back to the C. O. with the story. But commanding officers had plenty of other worries and were interested in results, not reasons for failure. And so, many of us cooked.

Then, on December 18, 1918, came a widely quoted G. H. Q. ultimatum: "Attention is again called to circular 27, which has evidently not been carefully read. Dietitians are *not* cooks." (I still think the term "dietitian" might well connote "cook"). A restatement of sections of circular 27 followed in which certain problems were clarified. Defects of service on the wards were to be reported to the C. O.;

defects of service or preparation in mess hall or kitchen, to the mess officer. Thus we were faced with a divided but still a tortuous way of achieving results. For the defects had to be corrected after having been reported. Only one hopeful note appeared under the final paragraph: "The dietitian is directly responsible for the preparation of special diets or modifications of the three listed diets. She should, however, be supplied with sufficient help to relieve her of the details of preparation of these items."

At last, seven months after arrival in France, we had a kitchen with cooks and kitchen police under my direct supervision! And I received one further distinction: at both Base Hospitals 117 and 214 I was known as the "lady mess sergeant." So in reality I probably had military rank.

But when we look at the service of the Army dietitian on this side we see a somewhat brighter picture. Mary Foley was one of those who did distinguished work at Fort Riley, so distinguished, in fact, that I understand this was the only base where a dietitian was given full charge of the kitchens. Miss Foley has had perhaps greater distinction since, for she is now a member of the staff of the Mayo Clinic. Only three other women, I understand, have had this honor, all of whom were physicians.

The base hospital at Fort Riley had a capacity of about 3000 beds. There were thirteen buildings, with a kitchen and mess hall in each. Each kitchen boasted a mess sergeant who had charge of the ordering, the general policing of the kitchen, and the assigning of duties to the men detailed for mess and ward duties. At first Miss Foley's duties were restricted to the writing of menus for special diets, general orders to "diet cooks", and general supervision of food on the wards. Even the diet cook was assigned to the dietitian by the mess sergeant. At times this cook was capable, but usually he was not. Often he was a member of the kitchen police whom the mess sergeant was anxious to get rid of, so he just turned him over to the dietitian.

Like those of most Army hospitals, the mess sergeants' menus were practically the same for both ward and regular patients. Popular items were baked beans, pie and doughnuts. Finally two sections: the pneumonia and empyemia, and the "special diets" were assigned entirely to the supervision of two dietitians. As might be expected, the mess sergeants predicted failure; they had the characteristic attitude—the Army was no place for a woman and no one was going to take orders from a woman. But when the enlisted personnel saw that the dietitian simplified their work, lessened the variety of foods cooked for the different meals, and always had the essential raw materials on hand, they gradually changed their attitude. Perhaps having the materials always on hand really turned sentiment in favor of the dietitian, for mess sergeants in 1917–19 were wont to make out menus without consulting their staff, to find out later that they had to revise their menus. This quite naturally made the cooks cross.

At the end of two months there was an official inspection by representatives from Washington, following which the two sections were reported to be the cleanest and best organized in any Army hospital in the United States.

The result was that other sections were anxious to have dietitians in charge, and many went to the mess officer and asked for a dietitian. The final victory for Miss Foley came when she was asked to have cooking classes two nights a week for mess sergeants, cooks and kitchen police, which they were obliged to attend.

I have felt that it was due to the praiseworthy work of Mary Foley and others on this side that the United States Public Health Service, in 1919, first called on the Red Cross for enrolled dietitians to serve in hospitals then being developed under the service.

This, I hope, has given you a general idea of the Army situation at home and in France. A few random extracts taken from diaries and letters may give you a picture of the daily life of the average dietitian who went overseas.

> Feb. 6, 1918. Assigned to Neurological Base 117. The unit is mobilized on Ellis Island awaiting orders. We drill, study French and wait, impatiently.
>
> May 18, aboard H. M. T. No. 597, the first lap of the journey. A typically English breakfast, grilled bacon and eggs, cold hard toast, jam, water-cress and tea. Then out on deck with a life-belt, our constant companion. Suddenly the bugle sounds for life-boat drill and away we scurry. It's remarkable how casually we take the submarine peril. We are mildly interested in watching the horizon, but a fatalism is present which dispels all worry or fear. And in the distance, steaming ahead of the convoy, a graceful grey battleship scouts on the horizon, a comforting sight. And we still have afternoon tea—with this pleasant custom, can anything happen to us or the English?
>
> In the evening a fog closes in, we cannot see our sister ships, we carry no lights, and we are shut off in a world of our own. On the deck below a sea of upturned faces; the enlisted men look up while a young nurse, with a warm, lovely voice, sings "My Little Grey Home in the West."
>
> May 27. Just entering the danger zone, cloudy and rough. As we are finishing luncheon, the submarine warning sounds, so I miss my dessert and coffee. Dash for state-room and get basket of food and heavy clothes. A few shots are fired.
>
> May 30. We are in the Irish Sea. A beautiful sunny day, with the sea like glass and the green hills of Ireland in the distance. Ought to be safe to take a bath now, for I may not have another chance for a month or so. But I'd forgotten that a submarine works best in a smooth sea, and no sooner in the tub, way down on D deck, than I hear the alarm. Dress and rush out in time to see a venomous looking periscope tearing through the water, leaving a tiny ribbon of froth in its wake. The big camouflaged troop-ships act like nervous hens, zig-zagging here and there. We don life preservers and wait at our assigned life-boat station. An airship drops depth bombs in the water; another hovers about; eight slim and nimble torpedo boats come out to meet us. How comforting is the sight of the British emblem!
>
> Finally we land at Liverpool, to hear that the Germans are nearing Paris, and that a mysterious big gun is shelling the city. Gloom overspreads us; we hear that the troops in our convoy are to be rushed right over to France. We travel all night to Southampton, and go on board again, sleeping as usual, fully dressed.
>
> Le Harve: packed upright in motor

trucks we ride to the train. Our first sample of travel rations: "corned willie," hardtack, canned tomatoes, and no water or coffee, just bottled cider and dreadful *vin ordinaire.*

At last we arrive at Base 8, Savenay, Brittany. On June 9 our first convoy of 450 wounded comes in from the front, and for the first time I go on a ward full of young soldiers apparently in the late teens and early twenties. They are all surgical cases, and what courage! They have been washed, and their wounds dressed, and they are cheerful again. Immediately they ask, "What state are you from, sister?" They joke about their missing arms or legs—all but one, who said, "I wish they'd stop talking about it, my chum was killed." Another, a marine, was boasting of the number of marines already killed; another, of the number of Germans he had bayoneted. But what a strange thing that they should talk of little other than how long it would take to get back to their own outfits and the trenches!

The mess sergeant at Base 8 had starred on the New York stage (he was the best one I ever had). One of the diet kitchen police was a Metropolitan Opera singer.

June 18. We leave Base 8 and entrain for the advanced sector, finally arriving at La Fauche where Base 117, the first neurological base in France, is to function. No patients yet. Go on duty in the nurses' mess, where my first job is to break in four raw French peasant women. The field ranges smoke, it rains, and the wood will not burn. Two days, and the Frenchwomen quit. With two nurses I cook and wash dishes for 60 nurses until two Army cooks arrive.

Delighted to find that some shell-shocked horses are quartered nearby and that we are permitted to ride them.

At last I'm established in a tiny office off one of the messes. We work against heavy odds: inadequate mess equipment, one Army range for 450 men, untrained cooks, uncertain supplies, and cooking over outdoor fires. Added to this is the resentment and suspicion of the mess sergeant (regular Army) over a female innovation—the dietitian. If I *only* had a commission!

This evening the nurses are singing hymns in their chateau and outside there is the constant heavy roar of the guns. A German plane has just gone over and 5 minutes later a French plane after it. Thousands of American troops are billeted all around us. By next week we'll begin to receive the results of the big drive.

Tonight they are singing "My Old Kentucky Home." It is a beautiful moonlit night, but the beauty is marred by the distant rumble of the guns, the flashes of light across the sky, and the thought, shall we have another air raid alarm tonight? How far away seems New York, and Sunday morning breakfasts at home! These lines best picture the situation:

> But most of all I count it strange
> The moon should suffer such a change—
> The moon that once from vast gray spaces
> On fields and towns and woodland places
> Would pour its silvered peace, now brings
> Only the threat of whirring wings,
> And deeds of horror and affright
> Made easy by that quiet light.

Life has a hopeful note today for I have a wonderful new pair of English riding breeches with buckskin facings, and the Red Cross has just sent us a

housekeeper and six French bicycles for the nurses.

And the next day: a convoy of patients has just arrived and while in the receiving office I asked a badly wounded youngster, lying on a stretcher, if he wanted anything to eat. He managed to whisper, "Milk." I hurried out and heated some and the sergeant held him up so that he could take a few sips. Then he tried to reach his poor battered and dirty kit bag. The sergeant opened it for him and with a shaking hand the boy took out a much handled package of cigarettes—the very last he had—and handed them to the sergeant. We thought at first he wanted a smoke, but instead, he wished to give them in gratitude, to the sergeant. He died that night.

Sept. 1918. Now the whole country is billeted with our troops in readiness for the big drive.

And two weeks later: Bedded with the "flu" and finally sent in the ambulance to Base 116. On the nurses' ward, where the dietitian, Caroline B. King (later associate editor of the *Country Gentleman*) brings supper to us, the first food I've cared to eat in two weeks. She cooked and served it herself.

Oct. 17. Back to 117 and on duty.

Oct. 23. On leave, our first in over four months, and at the Hotel Continental in Paris with three nurses. We giggle over everything—the funny waitresses in Duval's with long streamers on their caps, the old women watering the streets with watering cans, the old driver of our carriage with his faded pink coat. All the young are at the front or on leave. We have a bathroom, the *first* in five months.

Oct. 30. In Nice, and again a recurrence of flu. Out again November 9, returning alone to Base 117 by way of Paris, November 10. Paris seems very gay today. It is November 11, 1918. Feeling very ill again but get up and walk out into the Place de la Concorde at 11 a.m., just as the cannon are announcing the signing of the Armistice. At first people seem stunned, but the excitement increases as the day goes on. My temperature goes up with it, perhaps I'd better go to a hospital in Paris; but there is a superstition in the Army—if you are sick get back to your own outfit and you'll be all right; stop at a strange hospital and you'll die. But in any case, why not see the fun first and die afterward? For by now Paris is going wild over the news. And so, the following day, on the ice cold train I depart for Chaumont, temperature 103. A young aviator gives me his coat and at Chaumont wires for an ambulance at La Fauche. Then followed two weeks when at times my conscious mind pictured, with pleasurable sadness, the glory of a military funeral.

But I believe no dietitian died in France, so the acid test of military rank, a military funeral, never was applied to us. For I was out of bed on November 30, back on duty December 8, and on January 15 I'd just returned from a lorry-hopping and walking trip to the San Mihiel sector. And there, three miles from Thiaucourt and two months after the Armistice, we saw dead Germans sitting up in the trenches, with their helmets and gas masks still on their heads.

As a bright note in a picture too heavily overcast with shadow, perhaps our 1918 Christmas dinner at Base 117 is worth recalling. Pies or what passed for pies in the advanced sector were clumsily put together in square baking sheets suited to the field ranges. Now, I reasoned, pie isn't pie unless it's

round. And Christmas isn't Christmas unless you have pie or Christmas pudding. I could hardly bake pies for nearly 2000, myself, or even keep an eye on the untrained staff (mostly ex- and not so ex-shell-shocked patients) in six widely separated messes. So after planning the menus, easily done with the limited variety available, I concentrated on the pies, puddings and cakes. These, at least for the enlisted men, would have the home touch. In some miraculous fashion most of the essential ingredients were collected; for days ahead I had ranged the countryside in a little Ford Model T truck. We mixed the mincemeat in barrels, stirred with a small fence post, and the immense Army dishpan was our standard scoop or unit of measure.

I compounded the whole thing entirely by guess or instinct. The setting was that of some primitive kitchen, with a procession of kitchen police bearing huge dishpans of raisins or peeled apples and bottles of cognac, for we managed to get all the essentials. With a score or more of round pans that I'd gone miles to get, I finally succeeded in turning out pies for 600 men, and each pie I had shaped myself. I shall never forget one long table with 75 golden brown, *round* pies, and the wedge-shaped pieces of pie on 600 plates in one mess hall on Christmas Day. Nor were the bed cases neglected. All who were not too ill, around 60 in number, had real Christmas pudding steamed in a cloth from the diet kitchen. Enough mince meat was made for all six messes, but the cooks at the nurses' chateau, the patient officers' chateau, the convalescent camp, and the staff officers' mess were left to make their own round or otherwise pies.

Just before mess call I had a premonition about the 40 staff officers' mess. They, as might be expected, had the only trained cook in the whole base, a florid genius of uncertain temperament. Hurrying over I found him gloriously drunk, dinner in various stages of collapse, and the kitchen police floating around like rudderless ships. Cautiously I approached the cook and murmured soothingly: "Aren't you feeling well?" and then, "Perhaps I can help you." And so with the help of the kitchen police, I finished that dinner. Afterward it developed that professional jealousy had been the real reason for the cook's ill-timed imbibing.

Early in January 1919 we began to evacuate Base 117, and when my orders came to report for duty again in Savenay, at Base 214, most of our nurses had been sent home. Then followed what to me and to others was the worst part of the war—the endless waiting to go home. We Americans make good shock troops and we can rise to almost any emergency, but we *can't* wait.

In April 1919 we were continuing to receive patients, and at that time we had over 1000, some of them psychotic and many of them depressed—homesick, perhaps, as much as anything else. I usually had a few dozen little fruit turnovers on hand which I had baked, and as a sad-looking youngster would pass by I'd just hand out a little pie from the diet kitchen window. You ought to have seen how they cheered up! Again from my diary:

> But this waiting to go home is terrible. It is six months after the Armistice and it looks as though I'll

never get home unless I begin to try to pick things out of the air or develop some form of hallucination. Everybody goes around chanting that dismal ditty of the marines, "Oh! I don't want to die! I want to go home." The year's intensive discipline of the allied chief nurses of the A. E. F. is breaking down. Last night our chief nurse punished one of the nurses by confining her to the post for two days. The nurse had been caught wearing a pink, civilian nightgown, instead of the dreadful regulation cotton flannel pyjamas. The culprit was reminded of a dictum attributed to General Pershing: "You are over here to labor, not to allure".

Verses like these were popular:

Darling, I am coming back,
Silver threads among the gold,
Now that peace in Europe nears
I'll be back in seven years.

I'll drop in on you some night
When my hair is long and white
Yes the war is over, dear,
And we're going home, I hear!

But not until August 1919 did I reach home on the *Imperator* with about sixty other dietitians aboard. We would have been sent home long before had we not justified our existence in France.

Today, in the light of these experiences, the dietitians who enter the service will have some forewarning of the difficulties which beset a civilian employee in a situation entirely military. In the civilian hospital unit the dietitian serves as the executive director of the food service, responsible only to the hospital superintendent. In the military hospital in time of war the dietitian, at present, can function only indirectly, as an aid to the mess officer who may or may not be equipped through training as an executive of a food service. Despite the fact that the dietitian is responsible for the "preparation of all food furnished by the government", she would not have direct authority over the mess personnel. Indeed, she could not have this as a civilian employee.

So, again, as twenty-three years ago, much the same problems await the Army dietitian, and now, as then, the dietitian will prove her worth despite the hurdles she faces. We like to think that the devotion to service of country and mankind which stirred the hearts of that pioneer group of 1917 and 1918 will awaken again in the young dietitians of 1940. Hardships, dangers and difficulties have never deterred the doctors and nurses who serve in hospitals. And surely the more recent addition to the hospital's professional personnel, the dietitian, will not be found wanting.

Personnel work cannot be mechanized. The employer who attempts to make his personnel procedure a matter of technique, records, and phenomena is leaving out the heart of good personnel work. Personnel work if it is to be real must be personal work. There must be an intimate personal relationship between the management and the individual worker.—***Will, Arthur J.: Personnel management, Hospitals, July 1940.***

THE DIETITIAN IN GOVERNMENT SERVICE[1]

NELL WICKLIFFE AND FRANCES H. BOYKIN

Station Hospital, Fort Sam Houston, Texas

DIETITIANS seem to have been catapulted into government service in the era when war made it necessary for the government to secure a maximum of efficiency from a minimum of personnel and supplies. The first dietitians in direct affiliation with the government were secured through the Red Cross. As early as 1912 the Red Cross had availed itself of dietetic instructions and had formulated a committee on nutrition. There was a slow but constant increase in importance placed on dietetic knowledge during the immediate pre-war period. To quote Anna R. Van Meter in the *History of American Red Cross Nursing*, "In the face of the prospect of war which overshadowed the country, no better statement of the organization aims and obligations of the Dietitian Service of the Red Cross could have been formulated than in Miss Noyes' circular letter to dietitians issued January 1917: 'The development of the educational work and the organization of base hospital units under the auspices of the American Red Cross has created a demand for qualified and experienced dietitians. The opportunities for dietitians in this service may be grouped for the present under two main divisions: a. Instructors in Home Dietetics; b. Dietitians in Base Hospitals' ".

The year 1917 showed a rapid development in the Red Cross enrollment of dietitians. The first dietitian was enrolled February 3, 1917 and the close of the year found 645 dietitians registered as instructors and an additional 211 for Red Cross service in military hospitals. At this time dietitians were enrolled with the nursing staff and at the same salary, $50 per month.

According to a statement of Jane A. Delano at the 1918 meeting of the American Nurses Association, there were 85 Red Cross dietitians in cantonment and naval hospitals, 48 others were assigned to base hospital units, and 3 to French military hospitals, making a total of 136.[2]

While we must concede that the work done by the dietitian in base hospitals overseas and at home undoubtedly was good and illustrated the sound logic and justification of her position, there was a lack of standardization in the dietitian's work. The records reveal that at first she was looked upon as a combination housekeeper and lady cook. As the war went on, however, those who were capable received and discharged the responsibilities which today we consider the work of a dietitian.

A similar situation existed on a smaller scale in the Navy. Only 15 dietitians served in Navy hospitals, 14 in this country and one overseas.

With the close of the war, the Red Cross relinquished its direction of dietetic activities to the American Dietetic Association which had been formed in

[1] Read before the Texas Dietetic Association, Dallas, March 29, 1940.

[2] *Editor's Note:* Not all Army dietitians were enlisted by the Red Cross. These figures, we believe, concern Red Cross enlistments solely.

1917. Thereafter the Association assumed a guidance founded on a more intimate knowledge of the dietitian's work, problems and progress.

When the government again went on a peace-time basis, it created within the Public Health Service a bureau to care for ex-service men which included a dietetic department. The Army retained a small number of dietitians and later established its own training school at the Army Medical Center under the direction of the Surgeon General of the Army. In several of its departments the government has found the employment of dietitians so appropriate to the needs of the departments that they have considered it necessary to formulate a group of civil service standards for their employment. We have summarized these several activities as follows:

Department of Justice. Here and there we find dietitians in positions which are unique in that heretofore they have not been employed in such institutions. Dietitians are now employed in the Federal Reformatory for Women at Alderson, West Virginia, and the Hospital for Mental Defectives, Springfield, Missouri. It is not illogical that the Department of Justice will have need for increasing the number of dietitians it employs since it is assuming a more prominent part in our governmental system. Any dietitian desiring especially to be affiliated with the Department of Justice should so designate in her civil service application.

Indian Service. At present there are three positions in this service in which dietitians are employed. Dietitians, like other employees in the Indian Service, are employed through the Civil Service Commission following competitive examinations. They are paid a salary of $1,800 per annum, are employed only in the larger institutions and are required to meet civil service regulations.

Panama Canal Zone Service. In the Panama Canal Zone, dietitians come under Panama Canal civil service, are paid on a slightly higher salary scale than those on civil service in the States and have a limited field of opportunity in the Gorgas Hospital in the Canal Zone. At present there are four dietitians on duty here with the following status: One chief, one head, and two staff dietitians. Perhaps due to the tropical nature of the climate, these women are allowed two months' vacation with pay each year and transportation is furnished from port of embarkation at beginning of tour and at termination of assignment for return to the States.

With intensive Army fortifications in the Canal Zone the placement of Army dietitians there seems probable.

Department of Interior. In the District of Columbia and under the Department of Interior we find 17 hospital dietitians. These are selected, paid, and subject to transfer on a Civil Service basis. The hospitals represented are for the care of mental and tuberculous patients, and municipal institutions for both white and negro patients.

Public Health Service. Dietitians were attached to the U. S. Public Health Service when this agency assumed the responsibilities for the care of ex-service men in 1919. In 1922 most of the dietitians in this service were transferred to the Veterans Administration. Approximately 40 dietitians remain under the jurisdiction of the U. S. Public Health Service in 20 of its 27 hospitals, 17 of which are marine hospitals. The

department has two dietitians assigned to each of the two Narcotic Farms at Lexington, Kentucky, and Fort Worth, Texas, and one dietitian assigned to research study in Georgia. All are on civil service status and are subject to transfer in that service only. The growth of the Public Health Service seems to indicate that this field will offer more openings from time to time.

Veterans Administration. The largest group of dietitians employed by any government agency is that employed by the Veterans Administration. This group had a beginning concurrent with that of the Public Health Service and functioned under this same supervision from 1919 to 1922. When the government reached a decision to compensate its soldiers by medical care for disabilities incurred in the World War, it established hospitals in strategic sections whereby the greatest number would be benefited. It was formerly and still is the custom for a quota of the veterans to be hospitalized in Army hospitals and a quota of Army dietitians is employed from the Veterans Administration funds allotted that hospital. The Veterans Administration dietitians see service in hospitals of three types: tuberculous, neuropsychiatric, and general medical. At present there are 34 dietitians in 12 hospitals for the tuberculous, 60 in 28 neuropsychiatric, and 136 in 45 general medical hospitals, or a total of 230 dietitians in 85 hospitals with a total bed capacity of 55,336. Dietitians in this service are classified by the Civil Service Commission as chief dietitian, head dietitian, and staff dietitian. Eighty-three hospitals require the employment of one chief dietitian assisted by such head and staff dietitians as are considered necessary for an adequately functioning food control system. At each of the 100-bed hospitals one head dietitian works alone and the administration has one 26-bed hospital employing one staff dietitian. Dietitians in the Veterans Administration are transferred at the convenience of the government. These transfers arise frequently and no dietitian who is averse to duty in a section other than that in which she has been reared and educated should consider Veterans Administration work. To some this element of change is an attractive feature of the service.

The varying localities of Veterans Administration hospitals enable the dietitian to become acquainted with the necessity for keeping fully informed regarding market conditions, current local prices, and what is far more important, the general food habits of the section. To quote Grace M. Bulman, chief dietitian: "Even though the diet planned is nutritionally correct, attractive in appearance, properly cooked and served, economical in every respect and sufficient in quality and quantity, it may still fail to prove entirely satisfactory in the hospitals of the Veterans Administration. In common with Army hospitals the majority of the group for whom the menu is planned receive a longer period of hospitalization than that customary in civilian institutions. This fact makes it necessary that the meals include popular local dishes and frequent varieties that do not detract from the meal's nutritional qualifications."

In the Veterans Administration the newly appointed dietitian begins her

duties planning special diet menus based on the regular menu. As she advances in service and grade she becomes capable of assuming full responsibility for planning menus and seeing that such plans are properly executed. This system is excellent in that the more experienced and consequently the more capable dietitians are given advancement.

Since length of service gives one priority in advancement, a dietitian interested in any branch of civil service should indicate her choice on the application form, and once she is located in a service remain there. If one desires security and hopes to find it under civil service employment, it should be borne in mind that compensation increases with length of service.

Veterans Administration dietitians are paid in three salary groups beginning with $1,800 a year for staff dietitians, $2,000 for head dietitians, and $2,300 for chief dietitians. When quarters, subsistence and laundry are available, a deduction of not over $480 a year is made. Their salaries are subject to a 3½ per cent deduction for retirement annuities.

The Army Dietitian. Dietitians in Army service are classed at present as civilian employees and were first enlisted by the Red Cross during the World War. We have previously outlined the Red Cross activities in securing dietitians as instructors in dietetics and as dietitians in base hospitals. The work done by dietitians in the base hospitals during the war was of such merit as to secure a permanent place for them in Army hospitals. The necessity for some provision for special diet care was indicated in section 239, page 85 of *The Manual for the Medical Department of the United States Army* for 1916:

> When the number of sick requiring a special diet is large, the Commanding Officer of the hospital may establish one or more diet kitchens for the preparation of their food, under the immediate direction of such skilled dietists as are available. Competent dietists belonging to the Nurse Corps may be assigned to this duty. Rules for the management of the diet kitchen will be prescribed by the Commanding Officer of the hospital according to the particular needs of each case.
>
> Section 760, page 227, in enumerating the personnel allowed a base hospital, concluded with the following: "Forty-six nurses, female (including 1-Chief Nurse and 1-Assistant to the Chief Nurse, 41 in wards, 2 in operating room, and 1-dietist)."

The status of the Army dietitian during the World War was indefinite—she worked with the nurses, received the same pay, and was under the social supervision of the chief nurse, but she was not a member of the Army Nurse Corps since members had to be graduates of hospital training schools for nurses. Dietitians were therefore classified as civilian employees during the World War and are likewise classified at present. Thus the dietitian had to serve as a civilian employee, without rank, in an organization where authority is most essential to one responsible for the work of others. The Army dietitians, quite naturally, were unversed in military procedure and possibly because of this were little concerned by notions of precedent. Unhandicapped by the usual restrictions with regard to rank in the Army, they rendered their

services over a field limited only by the policy of their commanding or mess officer. In most instances, with the encouragement and cooperation of these officers they were successful in demonstrating their ability and value to the service. Even as early as February 1917 the demand for dietitians for Army service made it necessary to increase the Red Cross Committee on Dietitians to 20 members. On this committee were women who later were to become leaders in the field of dietetics, such as Lenna F. Cooper, Lulu G. Graves, Flora Rose, and Elva A. George.

With the transitional period from acute national situations to the more normal problems of peace, dietitians became directly affiliated with Army hospitals and the Army assumed the responsibility of employing its own dietitians. As early as 1920 the growing demand for dietitians in Army hospitals was evident. To fulfil this need, plans were begun in 1920 which resulted in a training school in dietetics for Army dietitians in 1922 at the Army Medical Center in Washington, D. C., under the direction of Brigadier General James D. Glennan of the Army Medical Center and Walter Reed General Hospital.

Applicants for the class at this time were required to have not less than two years' college work; however, in 1926 the requirements were raised from two to four years of college and a bachelor of science degree with a major in foods and chemistry. The number of students increased yearly and the school progressed rapidly until 1934 when it was discontinued due to the economy act. The following year it was reopened with a class of ten students. Each successive year until the present, the training school has graduated ten students, the majority of whom are employed by the Army.

Fifty-three graduate dietitians are now employed by Army hospitals, 49 in various hospitals in the States, two in Hawaii, one in the Philippines, and one in Puerto Rico.

Students entering the Walter Reed Training School in 1940 will be selected by civil service on unassembled examinations. Plans are being made to increase their number to twelve to meet increase in Army personnel. In consideration of the fact that Army nurses have military rank as commissioned officers, it has been apparent for some time that dietitians will eventually be accepted in the Army on the same basis. At present there is a Senate and House bill before the 76th Congress which provides for the commissioning of dietitians on the same basis as the Army Nurse Corps. The bill proposes as follows:

> Sec. 2 (a) Such female dietitians shall be allocated to grades as follows: To the grade of dietitian; to the grade of head dietitian; not to exceed 10 per centum of the authorized strength of female dietitians; and one to the grade of chief dietitian, and in the future not to exceed one per centum of the authorized strength of female dietitians.
>
> Section 3 (b) Dietitians . . . shall be entitled to the same pay, longevity pay, subsistence and rental allowances, leave of absence, travel allowance, medical attention, age and service retirement benefits, disability-retirement benefits, and other benefits as those to which members of the Army Nurse Corps who rank with them are entitled.

The pay schedule for Army nurses is as follows: A first pay-period of $70 per month with room, subsistence, and laundry for the first three years; a second pay-period of $90 per month with room, subsistence, and laundry for the second three years; and $115 per month for the third three years and $130 per month for the fourth three years. Beyond these grades a dietitian would become a head dietitian with a salary increase of $50 per month. The dietetic corps of the Army would consist of one chief dietitian ranking as captain with headquarters in Washington, D. C. Her duties would be the supervision and direction of the corps as a whole. Ranking subordinate to her would be head dietitians, directing the work at various Army hospitals and classified as first lieutenants. Staff dietitians would rank in order of the years of service and would be classified as second lieutenants. We have gone into this bill rather thoroughly because we feel it is desirable and that our status presents the same challenge to the American Dietetic Association and its affiliated bodies as did the nurse's status in previous years to the American Nurses Association.

The various funds from which Army dietitians are paid, make a confusing pattern. Some are paid from the Medical and Hospital Department fund, some from the Veterans Administration fund, and some from the Civilian Conservation Corps fund. Of these, dietitians paid from the former two funds have a civil service rating and occupy a permanent position. At present Army dietitians are employed as staff dietitians with a salary of $1,620 per year and a deduction of $180 per year for quarters, $216 for subsistence, and 3½ per cent for civil service benefits. Head dietitians receive $1,860 yearly with the deductions mentioned above. We of the Army feel that our contribution to dietetics has been real and permanent.

The duties of all government employed dietitians are clearly defined by the United States Civil Service Commission. While the duties in some hospitals may be modified to meet the needs and individual character of the hospital, in general they are consistent with those described. The duties of each are as follows:

Chief Dietitian. To act in an advisory capacity, when required, in diet therapy; to cooperate with physicians and others concerned in the dietetic treatment of patients; to plan, supervise, and direct the preparation and service of hospital dietaries to meet the needs of normal and abnormal metabolism; to accomplish necessary related duties and to maintain a dietetic service in accordance with approved medical standards.

Head Dietitian. To have charge of the preparation and service of food from a main kitchen or to supervise the preparation and service of specific diets and the serving of regular diets in the wards where the supervision of one or more dietitians is involved or to perform a combination of the above; to cooperate with physicians and others concerned in the dietetic treatment of the patient; to instruct patients with nutritional disorders; under direction, to plan balanced menus on a caloric basis; to have entire charge of the dietetic service in a hospital having a capacity of less than 100 beds; and to perform related duties as assigned.

Staff Dietitian. Under supervision

of the Head Dietitian or Chief Dietitian, to perform similar and related duties as assigned.

Government employed dietitians wear uniforms prescribed by their own service. They have in general a retirement plan which originates in the civil service provisions for deduction of three and one-half per cent monthly from their salary for the purpose of retirement. The age limit for civil service retirement is 70 years. The commission requires that all dietitians have duty totaling 44 hours a week.

We have attempted to cover those points in the service which are of interest and have emphasized those concerning organization and function which are especially pertinent to you as members of the profession.

The Food Situation in Britain....

Much attention is being given to dietetics, so that food can be used in the best and most economical way. There is great room for improvement. Ordinarily too much meat is eaten and other dietetic mistakes are made. A campaign of instruction is going on, with the backing of the government. The people are being told that their traditional Sunday dinner of roast beef and Yorkshire pudding might disappear without the nation suffering. In a series of lectures Dr. J. C. Drummond, professor of biochemistry, University of London, pointed out that "the Oslo health meal" (entire wheat bread, milk, salad and apple) had in English schools given better results as regards both the health and the development of the children than the usual dinner of meat and cooked vegetables. The working class housewife had been learning that whole wheat bread is better than white bread for her children. The last war taught us the value of scientific research with regard to food. The fine research machinery here is now all available to the government and is being used. Germany's home front collapsed in the last war not only because of shortage of food but because of failure to realize the importance of the newly discovered facts of nutrition. Professor Drummond regarded fats as unimportant if, instead, green vegetables and energy foods were taken. Their deprivation was a hardship purely for psychologic reasons. Physiologically we could do without them. Professor Drummond appears to be alone in holding this view.

There has been some rise in food prices, but they have been kept low as regards bread and other essential foods by a government subsidy of $250,000,000 per annum. In the last war subsidized foods rose in price by 133 per cent and unsubsidized foods by 284 per cent. A small book, "Feeding the People in Wartime," has been published by two agriculturists, Sir John Orr and D. M. Lubbock. They point out that there is some loss in converting milk into butter and cheese. The full value is obtained only by consuming it as liquid milk. Milk should be subsidized so as to bring the present level of consumption by the poor of a quarter of a pint daily up to two-thirds of a pint, the level of the rich. The potato they regard as of special value for health. An acre of potatoes yields twice as much food as an acre of wheat. So the potato is the best insurance against food shortage. It should be subsidized for increased consumption. Consumption of potatoes in Britain is only half what it is in some other countries, such as Belgium and Germany.—*Foreign Letters, J. A. M. A., 114: 2231, 1940.*

THE VITAMIN B COMPLEX IN NORMAL NUTRITION[1]

C. A. ELVEHJEM

From the Department of Biochemistry, College of Agriculture, University of Wisconsin, Madison

I HOPE no one is misled by the title of this talk and expects to hear the final word about the use of the B vitamins in normal nutrition. It would be difficult to present the practical aspects if all the factors were known and well recognized, but it is even more difficult when we are still in the midst of elucidating the individual components of this so-called complex. In fact, the emphasis must be placed on the limitations in our knowledge rather than on the known facts.

At the Milwaukee meeting of the American Dietetic Association in 1938, I pointed out that the dietitian had a new problem to consider in connection with the proper use of synthetic vitamins. Since that time I have seen little concerted effort to cope with this problem except perhaps at the symposium held at the American Institute of Nutrition meeting in Toronto in April 1939. In the meantime we have seen a tremendous increase in the promotion of commercial vitamin B complex preparations, both alone and with vitamins A and D. Does this mean merely a temporary enthusiasm because of the availability of some of the factors in synthetic form or does it mean a definite need for the addition of these factors to our natural diets?

With your permission, therefore, I should like to give you some of my own views on the subject. I may be laying myself open to considerable criticism, but without differences of opinion no progress is made.

In the first place, I feel that there are certain principles which should be kept in mind regardless of whether we are dealing with vitamins as a group or with specific components.

1. Vitamins should be obtained from natural foods if possible. Generally they are cheaper, more palatable, and in better balance with other factors when taken in this form. If we are to accept this principle we must also recognize that the distribution of the factors in foods and the requirement of each factor must be established as rapidly as possible. This is a large assignment, but with the commercial manipulation of our food supply a specific food recognized to be a good source of certain factors may become deficient without our knowledge. If we are to rely upon foods, we must know the possible deficiencies which result from different food combinations.
2. Concentrated forms of vitamins may be used effectively under many conditions but there is no virtue in using a concentrate merely because the vitamin is present in concentrated form. In other words, one gram of a product containing 100 units of a vitamin may be no more valuable than 100 gm. of a food containing 1 unit per gram. In most cases the 100 gm. of food would be much better since it might also contain

[1] Read before the Illinois Dietetic Association, Chicago, February 9, 1940.

100 units of 10 different factors. Concentrates, of course, have a very definite place in clinical medicine, and in cases of emergency the pure crystalline synthetic vitamin may be even more valuable than the concentrates. When the synthetic substance is used we must recognize that it supplies one and only one compound while the concentrate may supply several factors.

3. There is no fundamental objection to the addition of synthetic vitamins to food materials. We accept synthetic products in all other fields of human endeavor, why not in the field of nutrition? We have accepted the addition of salt to our foods, and in this specific relationship I see no difference between the addition of sodium chloride and iodine and, let us say, thiamin. The addition of synthetic vitamins may be cheaper, less objectionable to our taste, and more easily controlled than the addition of concentrates or concentrated forms of food. This does not mean that we are ready for wholesale fortification of foods. We must study the problem in the case of each vitamin and experiment until all questions are answered. The commercial fortification of foods must be carefully controlled; however, in this connection it is rather amusing that many more objections are raised when a commercial company wants to add a vitamin to a food than when new processing methods are introduced which are known to be destructive to the vitamins. If fortification is considered, the vitamins should be added to those foods which have a reasonable relationship to the vitamins.

How do these principles apply to the B complex? Since no concentrate of the B complex was knowingly prepared before 1895 and the human race survived until that time, it is evident that concentrates are not absolutely essential. It is true that diseases now attributed to a lack of specific members of the B complex were rampant in certain areas of the world, but one may say that this was due to faulty selection of food since the incidence of the same disease was nil in many other areas. I am a firm believer in free selection, but in this we must not be limited in our environment. I am not so sure that the natural selection can continue, for during the past fifty years our environment has become limited to the grocery store and the drug store. Our natural foods are packaged and devitalized and the vital elements are concentrated and sold in the drug store. How are you and I to know what we should buy from the grocer and what we should get from our druggist?

Let us look back for a moment on the nutritional work that has been done. All this progress has been dependent upon animal experimentation. Sometimes the animal was used to test foods for a known vitamin, sometimes in an attempt to understand the cause of a well known human disease. In any case these studies have left two very important imprints on the problems of practical nutrition, imprints that affect each and every one of you in your daily work.

First, in certain cases specific deficiency symptoms have been produced in experimental animals similar in many

respects to those observed in human cases. No one can object to the importance of such work because many diseases were not conquered until the experimental animal entered the picture; but I am afraid nutrition workers have been overly enthusiastic about showing pictures of these experimental animals. One always gets a better reception by having slides of a polyneuritic chick, or a blacktongue dog, but he may miss the fundamental problems and leave the impression that humans can be suffering from a lack of vitamins only if they show these outward symptoms. Thus they have a vitamin B_1 deficiency only when they show head retractions like a polyneuritic chick, or they cannot require vitamin B_6 because no one has seen a dermatitis in humans like rat dermatitis. Most of you have heard loose statements such as the following: There is no general vitamin B_1 deficiency in the United States because we rarely see cases of beriberi. Such statements fail to take into consideration that the outward symptoms of any vitamin deficiency may vary markedly in different species and with different degrees of deficiency, and that there may often be borderline deficiencies without specific symptoms. In the case of riboflavin deficiency alone, several different symptoms have been described in the same animal and the symptoms vary greatly in rats, chicks, and humans.

The other imprint which animal work has left upon us relates to the glorification of certain foods as sources of specific vitamins. The nutrition worker in his haste to make concentrates usually assays only a few foods and if he finds one that is a fairly rich source, this food becomes the important source of that factor, while actually other foods may be richer and quantitatively a more important source in the diet. In this connection I cannot refrain from citing the vitamin B_1 content of yeast and pork chops. Yeast has been accepted as the important source of vitamin B_1, yet pork muscle is almost as rich and certainly preferable in my diet.

With these facts in mind then let us consider the members of the B complex first with respect to their function, requirement and distribution.

The first member needs no great amount of discussion. It is available in pure form as thiamin and is specifically concerned in carbohydrate metabolism. When it enters the human body it is converted to cocarboxylase which functions as a coenzyme for the metabolism of pyruvic acid. If it is not consumed in large enough quantities pyruvic acid accumulates and all the symptoms secondary to this disturbance appear. The requirement for this vitamin is directly dependent upon the carbohydrate intake since animals placed on high fat diets require a correspondingly lower amount of the vitamin. The adult requirement is 1–2 mg. per day, and as most of you know, it is not impossible to plan a diet which supplies this amount—but it is not a simple task. It is unnecessary to bore you with figures for the distribution of vitamin B_1 except to say that we can now use the more recent values for this vitamin with greater assurance. The older values were not always reliable because the basal diets used in the bioassay were low in B vitamins other than thiamin.

The second factor, riboflavin, is also available in synthetic form, but when we

come to its function it cannot be dismissed in a few words. In the growing animal there is always loss of weight, in the rat denudation and cataract have been reported, and in the chick there is a curled toe condition undoubtedly associated with degeneration of the sciatic nerve. Recently Sebrell has described a specific syndrome in humans which he has called cheilosis. The occurrence of this disease is not so rare as was originally supposed. Numerous cases are being reported by Joliffe, Sydenstricker, and others.

In our own laboratory we have found a definite decrease in the *d*-amino acid oxidase content of the livers from animals suffering from riboflavin deficiency. I do not know how this correlates with the external symptoms, but it has demonstrated that a deficiency of this vitamin also causes a reduction in an enzyme system. There are several enzymes which contain riboflavin and the different symptoms observed may be related to disturbance in the different enzyme systems.

Riboflavin requirement may also be set at 1–2 mg. per day, and it is relatively easy to supply this amount in an average diet. The older values for the distribution of riboflavin obtained by conversion from vitamin G units must be used with reservation. The bacterial assay of Snell and Strong has been verified by animal assay and the simplicity of this assay should allow complete and extensive riboflavin assays on all foods. I should like to emphasize the importance of an uninterrupted supply of flavin since we have produced severe riboflavin deficiency in growing dogs in a period of three weeks. Thus the elimination of milk from the diet of an infant for a relatively short period of time might be disastrous.

The third member of the B complex to be obtained in pure form is nicotinic acid. I believe we are safe in concluding that nicotinic acid is the true antipellagra factor, although we must recognize that the pellagrin as seen in the field may be suffering from deficiencies other than that due to a lack of nicotinic acid. Sebrell and Butler have recently suggested that in order to avoid further confusion the diagnosis of pellagra should be confined to that syndrome which responds to nicotinic acid. However, we are not interested tonight in the treatment of pellagra, we are interested in its prevention. No definite figures have been established for the human requirement, but I am quite certain that 10–20 mg. per day would give complete protection against all symptoms of pellagra. We have been definitely handicapped by the lack of accurate values for the distribution of nicotinic acid in foods. The only reliable figures were those published by Sebrell in 1934 for a limited number of foods. The only reliable method still involves the use of the dog, although a few figures have been obtained by chemical methods. Table 1 gives a few results which have been obtained in our laboratory. An interesting example of the failure to recognize the importance of certain foods is the case of peanuts and nicotinic acid. Peanuts contain 13 mg. per cent, which is higher than milk, wheat germ, and vegetables—all of which have been recommended for the pellagrin. I think you will all agree that it is not easy to build diets adequate in nicotinic acid without some meat products.

We have definitely shown in the case of the dog and pig that the cozymase content of the liver and muscle is decreased in nicotinic acid deficiency. Whether this decrease is sufficient to account for the symptoms, we do not know, but it is quite likely that it is.

Our knowledge of the first three factors has been quite clear-cut, but when we come to vitamin B_6 we are in the intermediate zone between light and darkness and the remaining factors are even more obscure as far as human nutrition is concerned.

Vitamin B_6 is now available in synthetic form due mainly to the efforts of Merck and Company. For a considerable period this vitamin was associated only with rat dermatitis or acrodynia. About a year ago Helmer, Fouts, Lepkovsky, and Jukes found that dogs suffering from vitamin B_6 deficiency showed a hypochromic microcytic anemia. We have recently made similar observations and have also shown that vitamin B_6 is essential in the diet of chicks. It also has a very marked growth promoting effect on rats reared on diets low in this vitamin. Spies has reported some beneficial values of vitamin B_6 in human nutrition. The mechanism through which vitamin B_6 functions in the living cell is entirely unknown. The human requirement has not been established, but it cannot be greatly different from the vitamin B_1 requirement, which is 1–2 mg. per day. I have very little faith in any of the figures for the distribution of this factor in foods, and I would prefer to wait until improved methods are available before making any statement about the value of different foods as a source of this factor. We were misled when we assumed that corn was a good source and used it in certain basal rations while studying other factors. When Spies reported the beneficial effect of vitamin B_6 in some of his patients I was puzzled over the results because I thought a pellagrin would certainly get adequate vitamin B_6 from the high corn diet. Now that we have found corn to be very low, his results may be more readily explained.

TABLE 1

Nicotinic acid potency of foods based on bioassays with dogs

MATERIAL	MG. PER GM. DRY WEIGHT	MATERIAL	MG. PER GM. DRY WEIGHT
Liver, pork	1.2	Tongue, beef	0.4–0.5
Liver, lamb	1.2	Veal	0.5
Liver, veal	0.9	Brain, beef	0.3–0.5
Kidney, pork	0.85–1.0	Heart, pork	0.3
Yeast, brewer's	1.0	Heart, beef	0.3
Yeast, baker's	0.5	Dried cereal grasses	0.1–0.15
Pork, loin	0.45–0.6	Skim milk powder	.05–0.15
Pork, ham	0.4	Wheat germ	.05–0.1

The fifth member of the B complex is pantothenic acid. It has not been obtained in synthetic form but purified concentrates have been prepared. For a time it was called the chick antidermatitis factor, but we now know it is also needed by both rats and dogs, and

I am willing to wager that it is also needed in the human dietary.

I can go on and name a number of additional factors, but I am sorry that I cannot discuss their value in human nutrition. There is factor W, and we have indications that it is multiple in nature; factor U, which so far has only been associated with chick nutrition; vitamin H; choline, the gray-hair factor; the spectable eye factor; and a growth factor which we have recently found to be present in cartilage.

I think it is clear to most of you that you would not have much trouble with the B complex if figures were available for the requirements and distribution of twenty-four factors rather than three or four. You do, of course, have the advantage that in many cases a food rich in one member of the B complex also carries appreciable quantities of several of the other factors. However, this generalization cannot be carried very far. Thus cereals may be a fair source of thiamin and pantothenic acid, but a very poor source of riboflavin, nicotinic acid, and vitamin B_6. Vegetables are a good source of riboflavin but low in thiamin and pantothenic acid. Liver is an excellent source of most of the factors but is rather low in thiamin. Even milk, which supplies adequate amounts of all the factors when used as the sole article of diet, becomes limited in thiamin, nicotinic acid, and pantothenic acid when diluted with inert energy foods. You are also fortunate that while you are designing your diets some of the unknown factors are thrown in without your knowledge.

Now let us return to the second principle which I mentioned: namely, concentrated forms of vitamins may be used effectively under many conditions. I suppose concentrates are necessary because many people develop deficiencies due to ignorance, habit, economic conditions, etc., and the best way to counteract such a deficiency is to supply many days' requirement in a period of a few days. This could not be done if the vitamin activity were not multiplied several times. There are many valuable concentrates on the market, but we need a great deal of education in the use of these preparations.

At this point it might be well to consider the nutritional value of the individual synthetic vitamins. In most cases the vitamin activity of a natural product is due to two or more compounds. Thus vitamin B_1 activity is due to the sum of thiamin and cocarboxylase present. There is generally more cocarboxylase than thiamin. Cocarboxylase is the active form and thiamin must be phosphorylated before it is active. You might think cocarboxylase is much better. It is true that the phosphorylation takes place during glycolysis and since there is reduced food intake in vitamin B_1 deficiency, there may be reduced glycolysis. Actually there does not seem to be much difference between the two forms even upon injection. Cocarboxylase must be broken down to thiamin before absorption and it also diffuses with difficulty from all the cells. Joliffe found one case that was unable to utilize vitamin B_1 effectively.

Riboflavin activity is due to free riboflavin, riboflavin phosphate, yellow respiratory enzyme (protein plus riboflavin phosphate), alloxazine adenine dinucleotide, xanthine oxidase, etc. Synthetic riboflavin has cured all symptoms

ascribed to riboflavin deficiency. The same activity has been obtained in foods by bacterial, rat and chick assays which indicate that there is no difference in activity. However, we may find differences between the natural and the synthetic forms in certain types of disturbed metabolism.

Nicotinic acid activity in a food is due to free nicotinic acid, nicotinic acid amide, cozymase, coenzyme I, etc. Again nicotinic acid seems to work as effectively as any of the other forms. Cozymase has not been prepared in large enough amounts to be given a good trial in certain types of deficiencies.

There is much that can be said about the misuse of this form of diet therapy, but there is one point I want to stress in particular. There is an undue effort to get the vitamin in concentrated form. If a product containing 10,000 units per gram is good, then one that contains 1,000,000 units must be 100 times better. Thus the manufacturer takes a material like yeast, extracts, adsorbs, elutes, precipitates, etc., until he gets a small amount of material very rich, let us say, in thiamin, but of necessity lacking in most of the other factors originally present in yeast. The other factors have not only been lost but the cost of all these manipulations has increased the cost of the vitamin thus extracted out of all proportion to its original cost. I hold no brief for yeast, but since most of these vitamins were present in the yeast cell as part of a normally functioning metabolism, they are very likely present in a ratio most adequate for the human body. We are beginning to recognize that nutritional deficiencies are apt to be multiple, and if a person has lived on a diet low enough in nicotinic acid to produce pellagra, it is also likely to be low in vitamin B_1, riboflavin, vitamin B_6, and perhaps others.

For many years residues from liver extract after the removal of the pernicious anemia factor were completely ignored as far as nutritional values were concerned. More recently its value as a source of the B complex has been recognized, but even now attempts are made to sell fractions from the material because of its riboflavin or pantothenic acid content. Liver extract is an excellent source of practically all the B vitamins except B_1. I hope someone can persuade the commercial laboratories to leave this material at least partially intact.

In fact the third question, namely, the fortification of foods, is merely a modification of the above problem. If we have a concentrate containing a combination of water-soluble vitamins and it is especially low in one of the components, why not add that component in synthetic form if it is available? That is what is being done today, and it is not a bad idea providing enough natural source material is used to supply the unknown factors. One thing we must watch out for is the introduction of one vitamin out of all proportion to the others merely because this particular one happens to be very cheap.

Can we carry this procedure one step farther? If we have a dietary fairly well supplied with all members of the B complex except one, and this is available in synthetic form at a relatively low price, should we supplement one of the foods in this dietary with the pure vitamin? In this ideal case one would be tempted to say yes, if there were no

other objections. Of course the difficulty is that such ideal cases are rarely encountered. In the case of pellagra in the South, the diet is not only deficient in nicotinic acid but also apparently in thiamin, riboflavin, and probably other members of the B complex. The ideal way would be to increase the meat and milk consumption, but if this is economically impossible, I see no objection to studying the possibility of some sort of fortification.

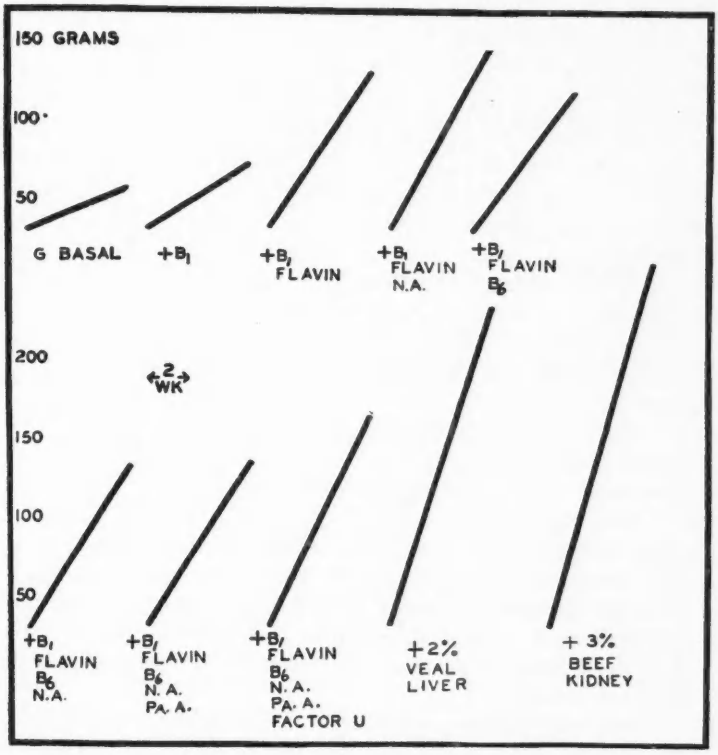


CHART 1. GROWTH OF CHICKS ON MODIFIED GOLDBERGER RATION ALONE AND WITH VARIOUS VITAMIN SUPPLEMENTS

B_1 = 100 micrograms of thiamin per 100 gm. ration.
Flavin = 200 micrograms of riboflavin per 100 gm. ration.
N.A. = 25 mg. nicotinic acid per 100 gm. ration.
B_6 = 200 micrograms of vitamin B_6 per 100 gm. ration.
Pa. A. = a concentrate of pantothenic acid equivalent to 750 micrograms per 100 gm. ration.
Factor U = a concentrate from yeast equivalent to 10 per cent of the original yeast per 100 gm. ration.

It is true that the fortification of the diet with nicotinic acid alone may lead to the development of more serious conditions of beriberi and riboflavin

deficiencies. But why not go a step farther and determine if it is possible to add not only nicotinic acid but other factors as well. If we want to object to studies of this kind we might also ask: why improve nutrition at all, for if you do people will only live long enough to die of old age!

Do not misunderstand me; I am not promoting the fortification of foods, I am merely trying to prevent dogmatic objections to the principle which may hinder progress in the experimental part of this program.

I am very familiar with the difficulties involved in the fortification of foods with synthetic vitamins or concentrates of individual vitamins, and the results in chart 1 clearly emphasize the problems in question. In this case chicks were placed on the modified Goldberger diet alone and supplemented with various synthetic vitamins and concentrates of some of the newer members of the B complex. In most cases some improvement in growth was noted due to the feeding of each additional vitamin, but normal growth was not obtained until a fair amount of a natural food such as liver, kidney or yeast was added. Likewise, synthetic vitamins should be used with caution in order to prevent the development of deficiencies more serious than the deficiency we set out to control.

. . . Hospitals in War . . .

Our country is slowly but definitely, perhaps inexorably, moving closer to participation in another World War. However firmly we may be convinced that the United States should not be drawn into European difficulties, we must be practical enough to prepare for a contingency which every one devoutly hopes may never affect us, but which the crowding events make more than probable.

The medical departments of our army and navy, in their plans for preparedness, are quietly and efficiently preparing for the use of our hospital staffs and organizations. They have asked the hospitals to arrange for personnel for service hospitals which may be needed. The hospitals are cooperating in every possible way. . . .

It is certain that the chaos and confusion which were so unhappily experienced in the World War will be replaced with orderly procedures in any future war in which this country may be involved. But the best results will be obtained when the hospitals' trustees and medical, administrative, and nursing staffs give timely thought and planning. By every means, and in all ways, they should cooperate closely with the medical services of the army and navy when they are asked to do so.—*Editorial, Hospitals, May, 1940.*

A SURVEY OF THE HOSPITAL DIETITIAN AND HER JOB. PART II[1]

S. MARGARET GILLAM

Department of Nutrition, The New York Hospital, New York

THE educational program in the various hospitals for patients, student nurses, medical students, interns and resident staff, and student dietitians, as brought out in this survey, should be of special interest to committees of the American Dietetic Association who are studying the educational aspects of the work of the dietitian. The report shows that inpatients as well as outpatients are usually taught by individual instruction; however, 7 hospitals are carrying on group teaching in the children's clinic, 38 in the diabetic, 2 in the tuberculosis, 15 in the obstetrical, 10 in the outpatient, 4 in the gastric, 2 in the medical, 1 in the cardiac and 1 in the arthritic clinic. Thirty-eight hospitals reported having nutrition clinics. These clinics instruct an average of about 8 "new" patients per day and see about 15 to 20 "old" patients per day.

The statistics acquired on the program for student nurses should have further study by our Association. There is a wide variation in the number of hours given, and the details of this study will be of interest to all dietitians cooperating in nutrition instruction for nurses. The League of Nursing Education has been working with members of the American Dietetic Association, revising the teaching curriculum, and recommendations have been made by the committee. In a list of outstanding hospitals which meet the requirements of the American College of Surgeons and have well qualified dietitians, why should the nutrition teaching program for nurses reveal such a wide variation in hours of classwork and experience?

In 12 of the hospitals reporting, the dietitian teaches dietetics to medical students. Diet therapy practice is now available to medical students under the supervision of the medical staff and the dietitian. In 34 hospitals instruction is given the interns and resident staff by the dietitian.

The student dietitian's program is tabulated in detail. The greatest variation noticeable is in the length of the course offered: 53 hospitals give a one-year course; 4, nine months; 6, six months; one, four months; 9, three months; 5, six weeks; and 3, a one-month course. The tabulated report gives the details concerning lectures and seminars provided for student dietitians.

[1] Conducted under the auspices of the American Dietetic Association by a subcommittee of the Administration Section under the chairmanship of S. Margaret Gillam.

	Group I	Group II	Group III	Group IV	Group V	Totals
EDUCATION OF PATIENT						
Title of Dietitian Teaching Inpatients						
Head Dietitian	47	67	102	13	14	243
Assistant Dietitian	1	14	73	37	47	172
Ward Dietitian			1		5	6
Teaching Dietitian					1	1
Clinic Dietitian	1		2	1	3	7
Therapeutic Dietitian			7	4	2	13
Pediatric Dietitian					1	1
Student Dietitian			2	1	1	4
No teaching		1	1	1	4	7
No answer	14	14	69	49	19	165
Total hospitals reporting	63	99	186	59	90	497
Type of Instruction						
Individual	50	80	176	52	63	421
Group	1	2	5	1	9	18
Demonstration	8	14	26	12	9	69
No teaching		1	2		3	6
No answer	12	13	8	52	21	106
Total hospitals reporting	63	99	186	59	90	497
Nutrition Clinic in Hospital						
Yes	3	2	10	5	18	38
No	54	76	151	40	52	373
No answer	6	21	25	14	20	86
Total hospitals reporting	63	99	186	59	90	497
"New" Patients Instructed Daily in Clinic						
High	3	10	20	25	20	
Low	1	3	1	1	2	
Average "new" patients	2.5	5	7.5	10.5	7.4	
"Old" Patients Instructed Daily in Clinic						
High	20	25	40	—	25	
Low	2	3	2	—	8	
Average "old" patients	6	9	13	—	17	
Dietitians Teaching in Other Clinics in Hospital						
Children's			2	1	3	6
Diabetic		1	18	13	14	46
Obstetrical			8	3	5	16
O.P.D.	2		2		5	9
Gastric					6	6
Surgical					1	1
Medical	1		1	4	6	12
Arthritis			1		1	2
Allergy			1			1
Cardiac		1				1
Nephritis		1				1

	Group I	Group II	Group III	Group IV	Group V	Totals
Metabolism		1	4	4		9
Neuropsychiatric			1			1
No teaching	42	70	110	20	33	275
No answer	19	29	51	21	37	157
Total hospitals reporting	63	99	186	59	90	497
Type of Instruction to Outpatients						
Individual	25	58	115	20	51	269
Group	2	2	4		18	26
Demonstration	5	3	8	15	15	46
No instruction	10			3	7	20
No answer	26	43	72	38	32	211
Total hospitals reporting	63	99	186	59	90	497
Group Teaching						
Children's clinic			1	1	5	7
Diabetic	4	1	5	2	22	38
Parents' class		1				1
Tuberculosis	1				1	2
Obstetrical	2		2	3	8	15
O.P.D.	2				8	10
Gastric					4	4
Medical		1			1	2
Cardiac					1	1
Arthritis					1	1
None	4	2		3	2	11
No answer	51	96	178	46	60	431
Total hospitals reporting	63	99	186	59	90	497
Does Hospital Carry on Nutrition Education Program						
Yes	3	5	14	7	18	47
No	44	66	138	38	42	328
No answer	16	28	34	14	30	122
Total hospitals reporting	63	99	186	59	90	497
Nutrition Education Program Carried on by:						
Clinic dietitian		2	4	1	4	11
All dietitians	5	1	10	3	21	40
Nurses		1				1
No answer	58	95	172	55	65	445
Total hospitals reporting	63	99	186	59	90	497
Related Nutrition Program for Inpatients and Outpatients						
Yes		2	9	4	19	34
No	25	36	66	16	26	169
No answer	38	61	111	39	45	294
Total hospitals reporting	63	99	186	59	90	497

	Group I	Group II	Group III	Group IV	Group V	Totals
Program Conducted by:						
Discussion groups	1	2	8	3	17	31
Individual instruction				1	4	5
Permanent exhibit			2		7	9
Posters		1	7	3	14	25
No answer	62	96	169	52	66	445
Total hospitals reporting	63	99	186	59	90	497
EDUCATION OF STUDENT NURSES						
Number Dietitians Teaching Student Nurses						
One dietitian	22	49	99	13	20	203
Two dietitians		3	32	18	10	63
Three "			6	4	9	19
Four "				1	1	2
Five "				1	7	8
Reported no training for nurses			44			44
No answer	41	47	5	22	43	158
Total hospitals reporting	63	99	186	59	90	497
Title of Dietitian Teaching Student Nurses						
Head Dietitian	22	27	109	28	14	200
Assistant Dietitian		11	50	18	36	115
Ward Dietitian		2	2	7	13	24
Clinic Dietitian		2	6	3		11
Therapeutic Dietitian		2	16	8	11	37
Teaching Dietitian		1	3	5	9	18
No answer	41	54	8	4	7	114
Total hospitals reporting	63	99	186	59	90	497
Number Nutrition and Cookery Lecture and Laboratory Hours						
4 hours		1				1
10 "	1					1
12 "			3			3
14 "				1		1
15 "		1		3		4
16 "	2				2	4
18 "			1		1	2
20 "			4	1		5
24 "	1	4		3		8
30 "	3	7	13	3	6	32
32 "		3	4			7
34 "		1				1
36 "		2	4		1	7
40 "	1		3	1	3	8
45 "	6	13	46	14	15	94
48 "		1	6	4	2	13
50 "	1		3			4
54 "			5		3	8

	Group I	Group II	Group III	Group IV	Group V	Totals
56 hours			1		1	2
58 "			3	1		4
60 "	5	9	23	5	4	46
63 "			3			3
64 "			1			1
66 "			1			1
72 "				1		1
75 "		1	1			2
84 "					1	1
90 "		1	4		1	6
120 "		1				1
304 "			1			1
Total	20	45	133	34	40	272
No answer	43	54	53	25	50	225
Total hospitals reporting	63	99	186	59	90	497
Year Nutrition and Cookery Given						
Probation	2	1	7	5	6	21
First year	9	33	117	26	27	212
Second year	2	3	10	5	4	24
Third year	1	1		1	1	4
No answer	49	61	52	22	52	236
Total hospitals reporting	63	99	186	59	90	497
Number Nutrition and Cookery Lecture Hours						
2 hours		1	1			2
3 "		1				1
4 "			3			3
8 "			1		1	2
9 "			2		1	3
10 "	1	3	6		1	11
12 "	1	1	2	1	3	8
13 "					1	1
14 "			1	2	1	4
15 "	8	14	52	13	20	107
16 "	1	8	13	4	4	30
18 "	1	1	12	2	1	17
19 "			2		1	3
20 "	6	6	9	6	2	29
23 "			3			3
24 "		1	2	1		4
25 "		2	2		1	5
27 "				1		1
30 "	2	3	16	5	2	28
32 "		1	3			4
33 "				1		1
35 "		1				1
36 "		1	1		1	3
45 "		1	2			3

	Group I	Group II	Group III	Group IV	Group V	Totals
46 hours		1				1
48 "					1	1
60 "		1			1	2
Total	20	48	135	36	40	279
Average number hours	39 hr.	21 hr.	40 hr.	19 hr.	16 hr.	
No answer	43	51	51	23	50	218
Total hospitals reporting	63	99	186	59	90	497
Number Nutrition and Cookery Laboratory Hours						
2 hours		1	5			6
8 "					1	1
10 "			1			1
12 "	1		2	1		4
14 "		2	1	1	1	5
15 "	2	4	9	4	3	22
16 "		3	3	3		9
18 "	1	1	4		2	8
20 "	1	6	6	1	2	16
22 "		1	3		1	5
24 "			5		4	9
25 "					1	1
26 "		2	1	1		4
28 "			5	2		7
30 "	8	13	54	12	14	101
32 "		3	8	2	2	15
34 "			2			2
36 "			6		4	10
38 "				1		1
40 "	4	3	8	2	2	19
44 "			1			1
45 "			5	3	1	9
48 "			1		1	2
56 "			1			1
60 "		1	2		1	4
72 "				1		1
90 "		1				1
Total	17	41	133	34	40	265
Average number hours	28 hr.	23 hr.	23 hr.	32 hr.	29 hr.	
No answer	46	58	53	25	50	
Total hospitals reporting	63	99	186	59	90	497
Number Diet Therapy Lecture and Laboratory Hours						
2 hours			1			1
4 "			1		1	2
5 "	1					1
10 "	1		2	2	2	7
12 "		1	2	5		8
14 "				1		1
15 "	6	7	46	9	16	84

	Group I	Group II	Group III	Group IV	Group V	Totals
16 hours	1	3	12	3	3	22
18 "		2	4	1	5	12
20 "	1	3	14	6	3	27
21 "					1	1
22 "		1	2			3
24 "		2	3			5
25 "		1	5	1		7
30 "	4	14	30	7	7	62
32 "		2	2		1	5
35 "			1			1
36 "		1	1	1		3
40 "	1	2				3
45 "		2	3	1	2	8
48 "			1			1
58 "		1				1
60 "			2			2
Total	15	42	132	37	41	267
Average number hours	20 hr.	19 hr.	21 hr.	19 hr.	19 hr.	
No answer	48	57	54	22	49	231
Total hospitals reporting	63	99	186	59	90	497
Year Diet Therapy Given						
First year	6	19	49	12	19	105
Second year	5	15	63	19	12	114
Third year	1	6	2	4	10	23
No answer	51	59	72	24	49	255
Total hospitals reporting	63	99	186	59	90	497
Number Diet Therapy Lecture Hours						
2 hours			1			1
3 "		1			1	2
5 "	1		1			2
6 "		1	1			2
9 "	1	1				2
10 "	1	4	3	1	4	13
11 "		1				1
12 "			3	4	3	10
14 "			1	1	1	3
15 "	8	8	59	11	16	102
16 "	1	4	12	4	4	25
18 "		4	13	1	6	24
20 "	3	7	14	6	1	31
22 "		1	1	1		3
24 "		1	3			4
25 "			3		1	4
26 "		1	1	1		3
30 "	2	6	7	4	1	20
36 "		1			1	2
45 "		2	2			4
48 "			1			1
Total	17	43	126	34	39	259
Average number hours	16 hr.	19 hr.	17 hr.	17 hr.	16 hr.	
No answer	46	56	60	25	51	238
Total hospitals reporting	63	99	186	59	90	497

	Group I	Group II	Group III	Group IV	Group V	Totals
Number Diet Therapy Laboratory Hours						
4 hours		2	1			3
5 "			1		1	2
6 "		2	1			3
8 "			4	1		5
9 "			2			2
10 "	1	5	3	1		10
12 "		3	7		3	13
14 "		2		1	2	5
15 "	2	2	5	2	2	13
16 "			2		2	4
18 "			2			2
20 "	1	1	1		1	4
27 "			1			1
30 "		1	5		1	7
32 "			1			1
36 "					1	1
52 "		1				1
Total	4	19	36	4	13	77
Average number hours	15 hr.	14 hr.	15 hr.	12 hr.	16 hr.	
No answer	59	80	150	55	77	420
Total hospitals reporting	63	99	186	59	90	497
Number Diet Therapy Practice Hours						
High	480	480	420	684	572	
Low	212	110	42	160	60	
Average number hours	344	234	235	305	273	
No answer	59	78	141	41	63	382
Total hospitals reporting	63	99	186	59	90	497
Year Diet Therapy Practice Given						
First year	2	4	12	4	6	28
Second year	10	19	69	16	10	124
Third year	4	13	16	10	12	55
No answer	59	63	89	29	62	302
Total hospitals reporting	63	99	186	59	90	497
Number Hours Experience Instructing Patients—Nutrition Clinic or Elsewhere						
High	5	10	16	12	96	
Low	5	2	1	1	1	
None	3	12	20	6		
Average number hours	5	4	6	7	13	
No answer	61	83	143	54	73	414
Total hospitals reporting	63	99	186	59	90	497
Number Additional Conference Hours with Dietitian						
High		60	30	33	30	
Low		½ hr.	½ hr.	1	1	

	Group	Group II	Group III	Group IV	Group V	Totals
Varies	2		1			
None		2	9			
Average number hours	2 hr.	20 hr.	8 hr.	9 hr.	8 hr.	
No answer	61	78	128	44	77	388
Total hospitals reporting	63	99	186	59	90	497
Conferences Supervised by:						
Head Dietitian	2	10	38	2	4	56
Assistant Dietitian			15	7	6	28
Therapeutic Dietitian			6	4	9	19
Ward Dietitian				1	1	2
Teaching Dietitian					6	6
Metabolism Dietitian				1		1
No answer	61	89	127	44	64	385
Total hospitals reporting	63	99	186	59	90	497
Conferences Held How Often						
Daily		1	24	2	9	36
Thrice weekly					1	1
Twice weekly			1		1	2
Weekly			4	2	3	9
No answer	63	98	157	55	76	449
Total hospitals reporting	63	99	186	59	90	497
Conference Held Where						
Conference Room					2	2
Diet Kitchen	2	5	35	9	14	65
Diet Office		4	20	8	9	41
Teaching Laboratory					1	1
Nutrition Clinic			1	1	1	3
No answer	61	90	130	41	63	385
Total hospitals reporting	63	99	186	59	90	497
EDUCATION OF MEDICAL STUDENT						
Number Nutrition Hours						
1 hour				1	2	3
3 hours					1	1
8 "					1	1
10 "					1	1
12 "			1	1	1	3
14 "			1			1
16 " or over			1		1	2
Total			3	2	7	12
Average number hours			13 hr.	6.5 hr.	7.3 hr.	
No answer	63	99	183	57	83	485
Total hospitals reporting	63	99	186	59	90	497
Number Lecture Hours						
1 hour					1	1
4 hours	1					1
8 "					1	1

	Group I	Group II	Group III	Group IV	Group V	Totals
10 hours					1	1
15 "					2	2
16 "					1	1
25 "			1			1
Total	1		1		6	8
Average number hours	4 hr.		25 hr.		10.9 hr.	
No answer	62	99	185	59	84	489
Total hospitals reporting	63	99	186	59	90	497
Number Laboratory Hours						
2 hours					1	1
4 "	1					1
15 "					1	1
Total	1				2	3
Average number hours	4 hr.				8.5 hr.	
No answer	62	99	186	59	88	494
Total hospitals reporting	63	99	186	59	90	497
Year Lecture and Laboratory Given						
Freshman						
Sophomore					1	1
Junior					2	2
Senior	1		2		3	6
No answer	62	99	184	59	84	488
Total hospitals reporting	63	99	186	59	90	497
Number Diet Therapy Practice Hours						
7 hours				1		1
9 "					1	1
100 "			1			1
No answer	63	99	185	58	89	494
Total hospitals reporting	63	99	186	59	90	497
Year Diet Therapy Practice Given						
Freshman					1	1
Junior			1			1
Senior			1	1	5	7
No answer	63	99	184	58	84	488
Total hospitals reporting	63	99	186	59	90	497
Diet Therapy Practice Supervised by:						
Dietitian			3		2	5
Therapeutic Dietitian					1	1
Doctor				1	2	3
Instructor			2			2
No answer	63	99	181	58	85	486
Total hospitals reporting	63	99	186	59	90	497
Lectures for Medical Students Given by:						
Doctor			1			1
Head Dietitian			3	2	3	8

	Group I	Group II	Group III	Group IV	Group V	Totals
Assistant Dietitian					2	2
Clinic Dietitian					4	4
Therapeutic Dietitian					1	1
Special Instructor					2	2
No answer	63	99	182	57	78	479
Total hospitals reporting	63	99	186	59	90	497
If Included in Medical School, In What Course Given						
General Medicine				1	5	6
Therapeutics					1	1
Biochemistry					1	1
Metabolism			1		2	3
No answer	63	99	185	58	81	486
Total hospitals reporting	63	99	186	59	90	497
If Separate Course—Give Name						
Diet Therapy			1		1	2
Dietetics					1	1
Pediatrics			1			1
No answer	63	99	184	59	88	493
Total hospitals reporting	63	99	186	59	90	497
EDUCATION OF INTERN AND RESIDENT STAFF						
Is Instruction Given to Interns and Resident Staff						
Yes		2	15	7	10	34
No			8	3		11
No answer	63	97	163	49	80	389
Total hospitals reporting	63	99	186	59	90	497
By Whom Given						
Doctor			3			3
Head Dietitian		1	14	6	5	26
Ward Dietitian					3	3
Therapeutic Dietitian			3	1	4	8
Teaching Dietitian					3	3
Pediatrics					1	1
Staff Dietitian		1	5			6
No answer	63	97	161	52	74	447
Total hospitals reporting	63	99	186	59	90	497
Number Hours Instruction						
High		4	15	3	5	
Low		2	2	1	2	
Average number hours		3 hr.	6 hr.	1.6 hr.	3.5 hr.	
No answer	63	97	178	54	88	480
Total hospitals reporting	63	99	186	59	90	497

	Group I	Group II	Group III	Group IV	Group V	Totals
EDUCATION OF STUDENT DIETITIAN						
Requirements for Appointment						
Degree						
Yes	2	3	20	18	21	64
No		1		1	1	3
No answer	61	95	166	40	68	430
Total hospitals reporting	63	99	186	59	90	497
Major in Foods and Nutrition						
Yes	3	3	13	16	18	53
No					1	1
No answer	60	96	173	43	71	443
Total hospitals reporting	63	99	186	59	90	497
Is College Credit Given for Any Part of Work						
Yes		2	1	5	6	14
No	2	4	18	12	15	51
No answer	61	93	167	42	69	432
Total hospitals reporting	63	99	186	59	90	497
Length of Course						
1 month		1	2			3
6 weeks			5			5
2 months						
3 "		4	2	2	1	9
4 "			1			1
6 "		1	4	1		6
9 "			4			4
1 year	3	2	8	19	21	53
No answer	60	91	160	37	68	416
Total hospitals reporting	63	99	186	59	90	497
Time When Students are Enrolled						
One a year	2	3	5	10	7	27
Twice a year		3	10	5	11	29
No answer	61	93	171	44	72	441
Total hospitals reporting	63	99	186	59	90	497
If Once A Year—When Enrolled						
June		1	1	1		3
July		1				1
September	2		3	7	7	19
October		1		2		3
No answer	61	96	182	49	83	471
Total hospitals reporting	63	99	186	59	90	497

	Group I	Group II	Group III	Group IV	Group V	Totals
If Twice A Year—Months Enrolled						
January and July					1	1
February and August					5	5
June and December		1				1
July and October		1			2	3
August and October					2	2
September and February			2		1	3
August and January		1	5			6
September and July			2			2
August and September				4		4
October and January				2		2
February and August				1		1
March and September				1		1
July and January				2		2
No answer	63	96	179	49	79	403
Total hospitals reporting	63	99	186	59	90	497
Number Administration Lecture Hours						
1 hour			1		1	2
3 hours			2		1	3
5 "					1	1
8 "			2			2
10 "			4	4	4	12
12 "	1				2	3
15 "			1	3		4
18 "				1	2	3
20 "				1	1	2
24 "			1		1	2
25 "			1		1	2
28 "					1	1
30 "				1	1	2
35 "				1		1
36 "					1	1
Total	1		12	11	17	41
Average number hours	12 hr.		10 hr.	17 hr.	15 hr.	
No answer	62	99	174	48	73	456
Total hospitals reporting	63	99	186	59	90	497
By Whom Given						
Head Dietitian	1		10	14	5	30
Therapeutic Dietitian					2	2
Staff Dietitian					2	2
Head of Department					4	4
Administrative Dietitian			2		3	5
Total	1		12	14	16	43
No answer	62	99	174	45	74	454
Total hospitals reporting	63	99	186	59	90	497

	Group I	Group II	Group III	Group IV	Group V	Totals
Number Medical Lecture Hours						
2 hours				1		1
4 "			1			1
7 "				1	1	2
9 "				1		1
10 "			1		4	5
12 "				3	1	4
15 "			2			2
18 "					3	3
20 "			3	5	1	9
24 "					1	1
25 "			1		1	2
26 "					1	1
30 "				1	1	2
32 "					1	1
36 "	1			1		2
40 "			1			1
80 "			1			1
90 "			1			1
100 " or over			1			1
Total	1		12	13	15	41
Average number hours	36 hr.		23 hr.	17 hr.	25 hr.	
No answer	62	99	174	46	75	456
Total hospitals reporting	63	99	186	59	90	497
By Whom Given						
Medical Staff			10	14	15	39
Teaching Dietitian			1		1	2
Physician	1					1
Total	1		11	14	16	42
No answer	62	99	175	45	74	455
Total hospitals reporting	63	99	186	59	90	497
Number Seminar Hours						
2 hours				1		1
3 "			1			1
7 "					1	1
8 "			1	1	1	3
9 "					1	1
10 "	1			1	1	3
12 "				3		3
15 "			1	1	1	3
20 "				1	1	2
24 "				1		1
30 "				1	4	5
35 "					1	1
36 "					3	3
40 "			3	1	1	5
50 "			1			1
60 "				1		1
Total	1		7	12	15	35
Average number hours	10 hr.		24 hr.	19 hr.	24 hr.	
No answer	62	99	179	47	75	462
Total hospitals reporting	63	99	186	59	90	497

	Group I	Group II	Group III	Group IV	Group V	Totals
By Whom Conducted						
Dietitian	1		8	10		19
Entire Staff					2	2
All Dietitians					4	4
Staff Dietitians					4	4
Chief Dietitian					5	5
Therapeutic Dietitian				5	1	6
Assistant Dietitian			1			1
Total	1		9	15	16	41
No answer	62	99	177	44	74	456
Total hospitals reporting	63	99	186	59	90	497
Number Conference Hours Per Week						
½ hour					1	1
1 "		2	6	6	4	18
2 hours			2	1	1	4
3 "			2	2	1	5
5 "			1			1
6 "			1		1	2
7 "			1			1
10 "			1			1
18 "			1			1
Total		2	15	9	8	34
Average Per Week		1 hr.	3 hr.	1.7 hr.	1.8 hr.	
No answer	63	97	171	50	82	463
Total hospitals reporting	63	99	186	59	90	497

The Beginning of Home Economics in the Middle West, Circa 1900.

NINE INSTITUTIONS were giving some form of work in what was then called "domestic science," and I studied their catalogs eagerly; but so far as I could see, they were on the cooking-school basis. They had cooking and advanced cooking under which they included salads—which I had regarded as mostly raw foods. In clothing they had sewing and advanced sewing, which included a gored skirt. During the summer I had made it my business to ask various teachers of cookery what they had for their first lesson in food work. Some said they began with fire; some with water. After wading in this sea, I decided to come back to the method I had long been familiar with in chemistry—to take one class of foods and work at it until we knew something about it. So I chose proteins, fats, and carbohydrates because that would give us our work with meat in the winter. I coined the phrase "Selection and Preparation of Food" as the title of the first course and "Economic Uses of Food" for the second. I really felt quite proud of my efforts, but critics soon appeared. . . .Meanwhile I was finding that my work had wheels within wheels. Outside the classroom door women waited, housekeepers who wanted help in their homes through the Farmers' Institute. Moreover, they were a bit suspicious of these newfangled notions about food. Chemistry and bacteriology were high-sounding terms, and science they did not know; but they could cook! I tried to impress on them that they did know science and obeyed its rules. They knew better than to scald their yeast, and they always sterilized their cans.—*Isabel Bevier, Recollections and Impressions of the Beginnings of the Department of Home Economics at the University of Illinois, J. Home Econ. 32: 291, 1940.*

THE UTILIZATION OF THE CALCIUM AND PHOSPHORUS OF TARO BY YOUNG RATS[1]

MARTHA POTGIETER[2]

Hawaii Agricultural Experiment Station, Honolulu

IN VIEW of the important rôle played by taro (6) in the nutrition of the ancient Hawaiians, and the present agricultural and dietetic possibilities of this crop throughout the tropics and the subtropics, it was decided to test the ability of this vegetable to supply the calcium and phosphorus needs of the animal body.

Innumerable experiments in other laboratories have shown that the calcium and phosphorus of the soluble calcium-phosphate salts, as well as of some organic forms of these minerals, are well utilized by the growing rat and also by man. As they exist in natural foods, however, these minerals are not always so well utilized by the animal body; for example, calcium oxalate in spinach and phytin-phosphorus in cereals.

Oxalates have been found to interfere with the utilization of calcium by rats (2, 3). Microscopic crystals of calcium oxalate have been found in both the corms and leaves of taro, but the amount of oxalate in the corms is so small that it cannot be detected by chemical methods satisfactory for determining 1 part in 5000 (6). In the present study only the corms of the taro were fed in the form of flour.

The present study was made to compare the utilization, by young rats, of the calcium and phosphorus of taro with the utilization of inorganic forms of these minerals. Albino rats, 21 days old, were selected for an 8-week experiment by the paired feeding method. A diet high in taro flour was fed, in which 97 per cent of the calcium and 58 per cent of the phosphorus were furnished by the taro, and a control diet in which the taro flour was replaced by cornstarch and soluble inorganic calcium and phosphorus salts (*see* table 1). The aim was to have the two diets contain equal quantities of calcium and phosphorus, but two factors produced a difference in the mineral content of the diets, namely, slight variability in the percentage of calcium and phosphorus in the taro flour, and a little higher than theoretical calcium and phosphorus content of the $Ca(H_2PO_4)_2 \cdot H_2O$. The latter was shown, by analysis of the salt used, to be due to the absence of some of the water of crystallization.

The rats were placed in individual screen cages 8 inches in diameter with raised bottoms. Each cage was placed on a 13-inch filter paper on a No. 10 Pyrex pie plate. The food intake was kept as nearly equal as possible for the two rats of each pair, and distilled water was given *ad libitum*. Four times

[1] The work reported herein was conducted jointly by the University of Hawaii and the U. S. Department of Agriculture at the Hawaii Agricultural Experiment Station. Published with the approval of the Chief, Office of Experiment Stations, U. S. Department of Agriculture, and the Director, Hawaii Agricultural Experiment Station, as Technical Paper No. 62.

[2] With the technical assistance of Toyo Takase, assistant in nutrition.

a week the filter papers (with the one- or two-days' accumulation of feces, urine, and spilled food) were removed, put into individual covered glass jars and replaced by clean filter papers. The spilled food on each paper (contaminated with excreta) was removed, weighed, returned to the filter paper and analyzed with it. Corrections for the calcium and phosphorus content of the spilled food and of the filter papers were made in calculating the weekly output of these minerals by each rat. Once a week each cage, Pyrex plate, food cup, and water cup were washed in hot 0.5 per cent hydrochloric acid and then in distilled water. Each week the wash water for each cage (about 3 liters) was boiled down to a small volume and stored in glass. The filter papers with excreta and spilled food, each week for each rat, were ashed in 200 ml. vitreosil dishes at dull red heat; the concentrated cage wash waters for the corresponding rats and weeks were gradually added to the dishes and evaporated to dryness, and the ashing was then completed. The dissolved ash solutions were analyzed in triplicate for calcium by the McCrudden method (4, 5) and for phosphorus by the ammonium phosphomolybdate volumetric method (1). Samples of the two diets (*i.e.* of each diet each time a new batch was made) were likewise analyzed for calcium and phosphorus.

TABLE 1

Average composition of diets

	TARO DIET	CONTROL DIET
	Grams per 100 gm. of diet	
Casein	15	17.2
Crisco	5	5
Yeast	8	8
Cod liver oil	2	2
Salt mixture (Osborne & Mendel salt mixture made without the $CaCO_3$ and H_3PO_4)	2.6	2.6
Taro flour*	67.4	
Cornstarch		64.8
$Ca(H_2PO_4)_2 \cdot H_2O$ (Merck's)		0.308
K_2HPO_4 (Baker's C.P. anhydrous)		0.140
Protein, calculated	17	17
Moisture, determined	4.3	3.2
Calcium, determined	0.066	0.088
Phosphorus, determined	0.317	0.348
	per cent	*per cent*
Amount of the dietary calcium furnished by taro flour or by inorganic salts	97	98
Amount of the dietary phosphorus furnished by taro flour or by inorganic salts	58	59

* Made by the taro processing division of this station, from a mixture of the corms of some common varieties of wetland taro, by steaming, peeling, slicing, drying and grinding.

Average initial and final body weights and average total calcium and phosphorus intake, excretion, and retention for the 8-week period for the two sexes on the two diets are given in table 2. Data on eight other rats are omitted because the animals spilled excessive amounts of food or were erratic in food intake. The data for four rats in a 6-week preliminary study on the taro diet, similar to the data given, are not included in the table.

At the end of the experimental period the rats were killed and individually ashed and analyzed for calcium and phosphorus by methods referred to above. Before analysis each carcass was brushed to remove any food particles from the fur, and the gastro-intestinal tract, with its contents, was removed

and discarded. The average calcium and phosphorus contents of the four groups of rats are given in table 2.

SUMMARY AND CONCLUSIONS

Young rats fed a diet high in taro, with an average total intake per rat of 0.424 gm. calcium and 2.037 gm. phosphorus over an 8-week period, retained 82 per cent of the calcium and 18 per cent of the phosphorus ingested. Ninety-seven per cent of the calcium and 58 per cent of the phosphorus in the diet were derived from taro.

Rats fed the control diet (in which starch and soluble inorganic calcium and phosphorus salts replaced the taro), with an average total intake per rat of 0.584 gm. calcium and 2.309 gm. phosphorus over the 8-week period, retained 88 per cent of the calcium and 20 per cent of the phosphorus ingested. Ninety-eight per cent of the calcium and 59 per cent of the phosphorus in the control diet were furnished by the inorganic calcium and potassium phosphates.

In this experiment the calcium of taro was nine-tenths as readily utilized by young rats as was that of $Ca(H_2PO_4)_2 \cdot H_2O$. The phosphorus in the taro diet was also nine-tenths as readily utilized

TABLE 2

Physiological and chemical data for rats on taro and on control diets

Diet	Taro	Control	Taro	Control	Taro	Control
Sex	Male	Male	Female	Female	M and F	M and F
No. of Animals	3	3	2	2	3 2	3 2
Av. initial body weight—gm.	43	44	42	42	43	43
Av. net gain in body weight—gm.	164	168	116	142	145	158
Av. total food intake—gm.	677	671	591	652	643	663
Av. gain in weight per gm. food eaten—gm.	0.24	0.25	0.20	0.22	0.22	0.24
Av. total calcium intake—gm.	0.447	0.590	0.390	0.574	0.424	0.584
Av. total calcium excretion—gm.	0.072	0.047	0.084	0.103	0.077	0.069
Av. total calcium retained—gm.	0.375	0.545	0.306	0.471	0.347	0.515
Av. % of ingested calcium retained	84	92	78	82	82	88
Av. total phosphorus intake—gm.	2.146	2.335	1.873	2.269	2.037	2.309
Av. total phosphorus excretion—gm.	1.688	1.801	1.630	1.938	1.665	1.856
Av. total phosphorus retained—gm.	0.458	0.534	0.243	0.331	0.372	0.453
Av. % of ingested phosphorus retained	21	23	13	15	18	20
Av. Ca:P ratio of minerals retained	1:1.22	1:0.98	1:0.80	1:0.71	1:1.07	1:0.88
Av. body calcium—gm.	0.735	0.932	0.631	0.826	0.693	0.890
Av. % calcium in body*	0.355	0.440	0.399	0.449	0.369	0.443
Av. body phosphorus-gm.	0.697	0.799	0.566	0.684	0.645	0.753
Av. % phosphorus in body*	0.337	0.377	0.358	0.372	0.343	0.375

* Total minerals in eviscerated body divided by weight of uneviscerated rat.

as was the phosphorus in the control diet, but on both diets the quantity of phosphorus retained might have been obtained from that part of the dietary phosphorus unavoidably furnished by the casein and yeast in the diet, rather than from the taro or the inorganic salts.

The author acknowledges the assistance of Carey D. Miller, Nutritionist, Hawaii Agricultural Experiment Station, in the planning of the study and the critical reading of the manuscript.

REFERENCES

(1) Official and Tentative Methods of Analysis of the Association of Official Agricultural Chemists, 3rd ed., 1930. Association of Official Agricultural Chemists, Washington, D. C.

(2) FINCKE, M. L., AND SHERMAN H. C.: The availability of calcium from some typical foods, J. Biol. Chem., 110: 421, 1935.

(3) KOHMAN, E. F., AND SANBORN, N. H.: Calcium availability in foods containing oxalates, Indust. & Engin. Chem., 27: 732, 1935.

(4) MCCRUDDEN, F. H.: The quantitative separation of calcium and magnesium in the presence of phosphates and small amounts of iron devised especially for the analysis of foods, urine and feces, J. Biol. Chem., 7: 83, 1909.

(5) MCCRUDDEN, F. H.: The determination of calcium in the presence of magnesium and phosphates: The determination of calcium in urine, J. Biol. Chem., 10: 187, 1911.

(6) POTGIETER, M.: Taro (*Colocasia esculenta*) as a food, J. Am. Dietet. A., 16: 536, 1940.

Nutrition in Spanish America

In accordance with the recommendations of the third International Conference on Nutrition, which met in Buenos Aires (The Journal, Feb. 3, 1940, p. 425), a new course of studies was inaugurated March 27 in the Instituto Nacional de la Nutrición of Buenos Aires. Dr. R. M. Ortiz, president of the Argentine Republic, and other dignitaries of the state attended the opening ceremonies. Dr. Ortiz has shown a special interest in national nutrition and was instrumental in creating scholarships to enable physicians of Spanish-American countries to continue their studies in the national institute of Buenos Aires. Several scholarship holders from Mexico, Brazil, Uruguay and Paraguay registered for the courses. Prof. Pedro Escudero, director of the institute, in the inaugural lecture pointed out that the natives, centuries ago, had extensive knowledge of cultivation of the soil, of plants and of the conservation of perishable foods. Their food was chiefly vegetarian. The speaker attributed the collapse of native civilizations in Peru and Mexico and the lack of vigorous resistance to the Spanish invaders to a vegetable diet with its impairment of physical and mental vigor. After the conquest, food conditions as well as social conditions became steadily worse for the natives. Escudero also analyzed the present conditions of nutrition in Argentina, Chile, Colombia, Ecuador, Mexico and Brazil. His conclusions were that the present day nutrition of more than 50 per cent of Latin American people was insufficient in quantity, excessive in carbohydrates and deficient in fats and proteins. Likewise the mineral and vitamin food levels were low. Hence the majority of people in Spanish America were chronically underfed and suffered the degenerative effects of pronounced protein deficiency. The solution of these problems, he said, was not to be sought in culinary recipes and public kitchens but had to be attacked by governmental social welfare. However, expert advice and cooperation were needed through all the stages from food production to food consumption.—*Foreign Letters, J. A. M. A., 114: 2233, 1940.*

THE NEW YORK MEETING

A Message from the Convention Chairman

New York with its many moods and facets offers a welcome to thousands of guests every year. Despite the ceaseless and strenuous activity which is ever-present there are nooks and corners where the past lingers with the present. There are old-world corners into which the new-world influence has not yet crept. New York is the art lovers' paradise, a joyous haven for those who love the theater and music, and a rendevous for the connoisseur of fine food.

To be sure, the convention program is crowded with professional interest, but the committee has left some time for "loitering" in New York. Into some of the "idle" time have been tucked trips to interesting places. The great city can be all things to all people and the hostess association hopes the week of October twentieth may be one of professional inspiration and great personal satisfaction to everyone.—ALTA B. ATKINSON, *Hunter College Commons, New York.*

A Message from the President, Greater New York Dietetic Association

The Greater New York Dietetic Association is looking forward with interest to your arrival in New York. Choose your favorite way of travel to bring you to the city. Whether you land in La Guardia Field, approach by a fascinating parkway, roll through the Hudson Tunnel or glide in on a streamliner, plan to come, we urge you, for we are waiting to meet you. We know that New York is a magnetic city, vivid and exhilarating, and we enjoy it most when we are sharing its delights and opportunities. Do give us the pleasure of having you here in October.—DOROTHY M. STEPHENS, *New York Post-Graduate Medical School and Hospital.*

Greetings from the New York State Dietetic Association

We take this opportunity to extend a hearty welcome to every one who is planning to come to the convention in New York this October. Our state and our city have many points of interest, professional and otherwise.

If you are driving, don't forget Niagara Falls, the Adirondacks, the Finger Lake district, and the gently rolling hills of Cherry Valley. There are hospitals, too, throughout the state where dietitians will be glad to show you their departments and their work. New York City boasts many attractions, but we want to mention particularly the World's Fair. Come and have a cup of tea with us there on Sunday afternoon. It will give you an opportunity to visit with old and new friends, and to rest a bit between the afternoon's sight-seeing and the evening's activities.

We hope you will come. It will give us great pleasure to welcome each one of you this October in New York.—HENDERIKA J. RYNBERGEN, *President.*

A Message from the Hospitality Chairman

We hope your plans are all made to come to New York in a few weeks for the 1940 A.D.A. convention. We will be ready and eagerly waiting to greet you.

The autumn season is an ideal time to visit New York; summer vacations are over, cool days are with us again and we face another busy season with renewed vitality.

The shops will be filled with new clothes so that you can select your winter wardrobe, or at least make notes on the latest styles. And don't forget Christmas shopping is not so far away.

We believe that you will want to come a few days early for a last look at the World's Fair which will close October 26. So that you will at least have time for a full day at the Fair on Sunday, the opening tea will be held on the grounds in the attractive building of the Woman's Advisory Committee.

Tuesday evening will be theatre night for all those who would like to see one of the current popular plays. We will secure seats in advance and while we cannot tell at this writing just what will be available at that time, you will receive a notice from Elsie Stark later so that you can let us know what you want.

With all the other things to do and see, not to mention a full program with much serious food for thought, this will be a meeting you won't want to miss. Do try your best to come.—DORIS H. TISDALE, *Standard Brands Inc., New York.*

The Program

The American Dietetic Association has a large membership with a variety of interests. The Program Committee has assembled for the program, speakers and subjects to interest every group. In many instances, we have considered it advisable to hold two sessions at the same time. You may want to attend both sessions! We hope so.

We believe that the subjects, most of which were suggested by the members, are timely, interesting and educational. We know that the speakers include noted clinicians, inspiring investigators, experienced executives, and educators. Leading dietitians from many fields will participate in the program. We are confident that each member will find in the program something of interest each day.—NELDA ROSS, *Program Chairman; Director, Department of Nutrition, Presbyterian Hospital, New York.*

Preliminary Program, American Dietetic Association, New York, October 18-25, 1940

Friday, October 18

10:30 a.m. EXECUTIVE BOARD MEETING
Presiding: Beula Becker Marble

Saturday, October 19

10:00 a.m. EXECUTIVE BOARD MEETING
Presiding: Beula Becker Marble

Sunday, October 20

9:00 a.m.–4:00 p.m. REGISTRATION

10:00 a.m. HOUSE OF DELEGATES
Presiding: Nell Clausen

4:00–6:00 p.m. TEA. National Advisory Committee Building, New York World's Fair. Given by New York State and New Jersey Dietetic Associations

7:00 p.m. PLACEMENT BUREAU BOARD MEETING
Presiding: Selma Streit

8:00 p.m. JOURNAL BOARD MEETING
Presiding: Helen S. Mitchell, Ph.D.

Monday, October 21

9:00 a.m. REGISTRATION (Register early—then visit exhibits)

10:30 a.m. OPENING SESSION
Presiding: Nell Clausen
Invocation:
President's Address: Beula Becker Marble
Fewer and Better Diets: Eugene F. DuBois, M.D., Professor of Medicine, Cornell University Medical College, New York

12:30 p.m. WELCOMING LUNCHEON
Presiding: Mary deGarmo Bryan, Ph.D.
Greetings:
Dorothy Stephens, President, Greater New York Dietetic Association
Henderika J. Rynbergen President, New York State Dietetic Association
Helen Judy Bond, Ph.D., Past-President, American Home Economics Association
Representative from American Medical Association
Representative from American Nurses Association
Claude W. Munger, M.D., Director, St. Luke's Hospital, New York; Member, Advisory Committee, A. D. A.
Food Through the Centuries: Edith M. Barber, Editor, Food Column, New York Sun

2:30 p.m. SYMPOSIUM ON THE VITAMINS
Presiding: Grace MacLeod, Ph.D.
Significance of Different Levels of Vitamin Intake: Henry C. Sherman, Ph.D., Mitchell Professor of Chemistry, Columbia University
Appraising Vitamin Status from the Standpoint of Normal Nutrition: Carroll Palmer, M.D., U. S. Public Health Service
Considerations in Selecting Values for Expressing the Vitamin Content of Foods: Hazel Munsell, Ph.D., Nutri-

tion Chemist, U. S. Department of Agriculture

Recent Advances in Clinical Applications of the B Vitamins: Norman Jolliffe, M.D., Associate Professor of Medicine, New York University College of Medicine

5:30 p.m. BUFFET SUPPER

8:00 p.m. SYMPOSIUM ON PERSONNEL

Presiding: Lenna F. Cooper

How the Executive Learns: Merritt Lum, Consultant on Supervisory Relations

A Comprehensive Study on the Training of Non-Professional Personnel: Elizabeth Cole, Administrative Dietitian, Montefiore Hospital, New York

Our Responsibility to the New Employee: Elizabeth Rugh, Chief Dietitian, Veterans Administration Facility, New York

Safety Education: Alta B. Atkinson, Manager, Hunter College Commons, New York

The Medical Supervision of Hospital Food Handlers: Michael J. Lepore, Director, Personnel Medical Department, Presbyterian Hospital, New York

Playtime for Your Employees: Lillian I. Myers, Montefiore Hospital, New York

8:00 p.m. MATERNAL AND INFANT HEALTH

Presiding: Anna dePlanter Bowes

The Social Score in Preparedness—What of Mothers and Babies?: Elizabeth M. Wagenet, Executive Secretary, National Council for Mothers and Babies

Diet in Pregnancy and Lactation: Bertha Shapley Burke, Instructor in Nutrition, School of Public Health, Harvard University

Psychological Aspects of Feeding in Early Childhood: William Siddon Langford, M.D., Director, Pediatric Psychiatric Clinic, Babies Hospital, New York

Tuesday, October 22

8:30 a.m. COMMUNITY EDUCATION SECTION

Presiding: Martha Koehne, Ph.D.

Community Education Through Public Exhibits or Displays of Reliable Books and Pamphlets on Food and Nutrition: Lillian B. Storms, Ph.D.

Educating the Public to Judge Food Facts from Food Fallacies: Alice B. Smith

Assembling a Loan Collection of Reliable Radio Scripts on Food and Nutrition: Mary B. Neel

Minimum Qualifications for Nutritionists in Public and Private Health Agencies: Helen A. Hunscher, Ph.D.

Visual Education Material as Aids in Community Education: Jet C. Winters, Ph.D.

Collection and Publication of Successful Methods and Devices for Teaching Food and Nutrition to the Public: Estelle E. Hawley, Ph.D.

Report of Summer Institute at Cornell University for Persons Interested in Community Nutrition and Food Educational Work

8:30 a.m. ADMINISTRATION SECTION

Presiding: Grace Bulman

Central Tray Service: Lucille Refshauge, Mt. Sinai Hospital, Philadelphia

Reports of Committee Chairmen:

1. The Trained Dietitian in College Food Service: Fern W. Gleiser, Iowa State College
2. Food Cost Accounting in Small Institutions: Bar-

bara Reid Robson, Berkeley, Calif.

3. Kitchen Equipment: Mary M. Harrington, Harper Hospital, Detroit
4. Problems of Public Institutions: Mame T. Porter, Department Social Welfare, New York
   a. Administrative Problems: Christine Pensinger, Department Public Welfare, Illinois
   b. Adequate Diets: Jane Sedgwick, Department Public Welfare, California
   c. Civil Service Qualifications for Dietitians and Personnel Problems: Florence Peters, Department of Welfare, Pennsylvania
5. Study of Methods of Food Service in Large School Cafeterias: Constance C. Hart, Board of Education, Rochester, N. Y.
6. Administrative Terminology: Mary W. Northrop, King County Hospital System, Seattle
7. Report of Advisory Committee on Graduate Student Problems in the Institution Field: Grace Augustine, Ph.D., Texas College for Women

10:30 a.m. PROBLEMS OF FOOD SERVICE AND MANAGEMENT IN COLLEGES

Presiding: Anna M. Tracy

Interior Decoration and Interior Architecture for Public Buildings: Nathaly d'A. Smillie—Member of American Institute of Decorators, Jones & Erwin

Housekeeping in Dormitories: Elizabeth C. Gibbs, Manager of Residence Halls, Teachers College, Columbia University

Cooperative Dormitories: Fern W. Gleiser, Head, Institutional Management, Iowa State College

Student Labor: Elizabeth Ink, Supervisor, John Jay Hall Dining Rooms, Columbia University

Menu Making for Residence Halls: Selma Streit, Business Director, Scottish Rite Dormitory, Austin, Texas

10:30 a.m. NUTRITION AND DIET THERAPY

Presiding: Angeline Phillips

Diet in Diseases of the Digestive Tract: A. H. Aaron, M.D., Professor of Clinical Medicine, University of Buffalo Medical School

Nutritional Factors Affecting Eye Function: Helen S. Mitchell, Ph.D., Research Professor in Nutrition, Massachusetts State College

Diet and Aging: Clive M. McCay, Ph.D., Professor of Nutrition, Cornell University

12:30 p.m. EXHIBITORS LUNCHEON

Presiding: Ina S. Lindman

Address—How the American Soldier is Fed: Paul P. Logan, Major, Q.M.C., Army Industrial College, Washington, D. C.

2:30 p.m. GENERAL SESSION

Presiding: Beula Becker Marble

Dietitians by Remote Control: Katharine A. Fisher, Director, Good Housekeeping Institute

BUSINESS MEETING

Reports of Officers, Section and Committee Chairmen

Election of Officers

FOREIGN DINNER NIGHT

THEATRE NIGHT

8:00 p.m. GENERAL SESSION (Open Meeting)

Presiding: Mary I. Barber

Our Daily Meals: Pauline Murrah, Nutrition Consultant, Department of Health, New York

Gilt Edged Slimming: Ida Jean

Kain, Newspaper Columnist, King Features Syndicate
Dietary Fads: (Speaker to be announced later)

Wednesday, October 23

8:30 a.m. PROFESSIONAL EDUCATION SECTION
Presiding: Gladys Hall
Reports of Committee Chairmen:
1. Supplement to Outlines of Courses in Nutrition for Nurses: Planning a Nutrition Laboratory: Helen Hubbell, Ph.D.
2. Teaching Nutrition to Medical and Dental Students: Anna dePlanter Bowes
3. Educational Requirements for Dietitians Teaching Student Nurses: Marie L. Hines
4. Illustrative Material for Teaching the Student Nurses: Anna M. Light
5. Self Improvement While on the Job: Emma L. Feeney

10:30 a.m. NUTRITION AND DIET THERAPY
Presiding: Katharine Brown
Water Metabolism: Dana W. Atchley, M.D., Associate Professor of Medicine, Columbia University College of Physicians and Surgeons, New York
What the Dietitian Should know About Clinical Laboratory Methods: Herbert Pollack, M.D., Chief, Adult Metabolic Clinic, Mt. Sinai Hospital, New York
Nutritional Care of Surgical Patients: John D. Steward, M.D., Associate in Surgery, Harvard Medical School

10:30 a.m. FOOD COST CONTROL
Presiding: S. Margaret Gillam
The Budget and Food Cost Control: Joseph Brodner, C.P.A., Harris, Kerr, Forster and Company
Recipe Control: Bertha E. Nettleton, General Foods Corporation
Portion Control: Margaret Allen Byrns, The New York Hospital
Pay Cafeteria Type of Service: Mary M. Harrington, Harper Hospital, Detroit

12:30 p.m. STATE OFFICERS LUNCHEON
Presiding: Mary I. Barber

REUNION LUNCHEONS

3:00 p.m. PROGRESS OF THE YEAR
Presiding: Frances MacKinnon
A Glossary of Terms Used in Dietetics—Preliminary Report: Mary W. Northrop, King County Hospital System, Seattle; Sister Jeanne d'Arc, Fontbonne College, St. Louis
Food Cost Accounting in Small Institutions: Barbara Reid Robson, Berkeley, Calif.
A Study of Diets Used in the Treatment of Gastrointestinal Diseases other than Peptic Ulcer, with a View to Suggesting a Standard Nomenclature: Elizabeth Tuft, Wesley Memorial Hospital, Chicago
The Rural School Lunchroom as a Center for Community Education. (Preparation of Manuals for Untrained Lunchroom Managers): Mary Spalding, Massachusetts Department of Health, Boston
Educational Requirements for Dietitians Teaching Student Nurses: Marie L. Hines, University Hospitals, Cleveland

6:00 p.m. SPECIAL GROUP DINNERS (Anyone who wishes special group dinners arranged should write to the Business Office and such requests will be forwarded to the program chairman.)

Thursday, October 24

8:30 a.m. DIET THERAPY SECTION
Presiding: Frances MacKinnon

Reports of Committee Chairmen:

1. Preparation of Exhibit Material Illustrating Therapeutic Diets: Marie V. Kraus, The New York Hospital, New York
2. Compilation of a Glossary of Terms to be Used in the Preparation of Articles on Normal Nutrition and Diet Therapy: Sister Jeanne d'Arc, Fontbonne College, St. Louis
3. A Study of the Adequacy of Diets Used in the Treatment of Peptic Ulcer: Coralie M. Green, Harper Hospital, Detroit
4. A Study of Diets Used in the Treatment of Gastrointestinal Disease other than Peptic Ulcer with a View to Suggesting a Standard Nomenclature: Elizabeth Tuft, Wesley Memorial Hospital, Chicago
5. A Form for Taking a Food History to Submit to Doctors for Use in Diagnosis: Dorothea Fletcher Turner, University of Chicago Clinics
6. An Enlargement of the Collection of Forms Used in Food Clinics to Serve as Reference Material for Dietitians and Administrators Interested in Establishing such Clinics: Edna Cox, King County Hospital System, Seattle

Discussion of Projects to be Carried during the Next Year

1. A Study of Dietetic Practice in Normal Pregnancy, the Complications of Pregnancy and in Lactation
2. The Preparation of a Chart for the Patient's Hospital Record Showing his Dietetic Care
3. A Collection of Materials Used for Teaching Patients in the Hospital and Food Clinic
4. (Other projects to be suggested from the floor.)

10:30 a.m. PROBLEMS IN EDUCATION

Presiding: Gladys Hall

Practical Application of Nutrition and Diet Therapy for the Student Nurse: Louise Stephenson, Presbyterian Hospital, New York

The Student Dietitian—An Experiment in Cooperative Education: Margaret A. Ohlson, Ph.D., Associate Professor, Foods and Nutrition, Iowa State College

Panel Discussion: Re-evaluation of Student Dietitian Training:

Grace Godfrey, Dean, School of Home Economics, Drexel Institute of Technology, Philadelphia

Lenna F. Cooper, Chief, Department of Nutrition, Montefiore Hospital, New York

Mable MacLachlan, Director of Dietetics and Housekeeping, University of Michigan

Phyllis Chamberlain, Student Dietitian

10:30 a.m. PROBLEMS IN KITCHEN MANAGEMENT

Presiding: Grace Bulman

Efficiency in Motion: Alfred I. Hess, Mechanical Engineer, Eastman Kodak Company, Rochester, N. Y.

New Ideas in Food Service Equipment: Owen T. Webber, Consultant in Problems of Group Feeding, Weehawken, N. J.

Public Health Aspects of Dishwashing: Walter D. Tiedeman, Chief of Milk and Restaurant Sanitation, New

York State Department of Health

12:30 p.m. STATE EDITORS AND PUBLICITY LUNCHEON
Presiding: Edith M. Barber
REUNION LUNCHEONS

2:30 p.m. NUTRITION AND THE COMMUNITY
Presiding: Martha Koehne, Ph.D.
Nutritional Deficiencies of Adolescence: William Schmidt, M.D., Instructor in Pediatrics and Public Health, Cornell University Medical College, New York
Economic Status of American Families: Faith M. Williams, Chief, Cost of Living Division, U. S. Department of Labor
How Can the Dietitian Coordinate Her Work with Related Community Activities?: Sue E. Sadow, Supervisor, Home Economics Section, Department of Welfare, City of New York

2:30 p.m. SERVING THE PUBLIC
Presiding: Margaret Cowden
Subject to be Announced: Grace E. Smith, Grace E. Smith Company, Toledo, Ohio
Economies and Economics in the Handling of China, Glassware, and Other Supplies: Harold M. Hirsh, Merchandise Councilor, L. Bamberger & Co., Newark, N. J. and R. H. Macy & Co., New York

7:30 p.m. ANNUAL BANQUET
Presiding: Beula Becker Marble
Address: Foster Kennedy, M.D.

Friday, October 25

DAY FOR SCHOOL LUNCHROOM MANAGERS

Morning

Trips to Various High School Cafeterias: Arranged by Grace Miller, Director High School Cafeterias, City of New York

Noon

Lunch at the Cafeterias

Afternoon

Quantity Cooking Demonstration for School Lunchroom Managers: Chairman: Mary Agnes Davis, Teachers College, Room 206, 2:00 p.m.

Clinics

Thursday, October 24

Time: 10:00 a.m.
Hospital: Mt. Sinai Hospital
Clinic: Diabetic
Program: Illustrative Cases Showing Use of Special Division of Daily Intake of Carbohydrate and Protein with Protamine Zinc Insulin. Lantern slides and patients.
Physician: Herbert Pollack, M.D., Chief, Adult Diabetic Clinic
Dietitian: Ida Wides
Attendance: Unlimited

Friday, October 25

Time: 10:15 a.m.
Hospital: Post-Graduate Hospital
Clinic: Obesity
Program: Observation of Cases Followed by Discussion
Physician: James J. Short, M.D.
Dietitian: Elizabeth Taylor
Attendance: Limited to 10

Time: 10:00 a.m.
Hospital: The New York Hospital
Clinic: The Dietary Treatment of Several Conditions Found in Hospital Wards
Program: Presentation and Discussion of Cases by Eugene F. DuBois, M.D., A. T. Milhorat, M.D., and S. Z. Levine, M.D.
Physician-in-Charge: Eugene F. DuBois, M.D.
Dietitian: Mabel W. Perry
Attendance: Limited to 375

Time: 10:00 a.m.
Hospital: Presbyterian Hospital
Clinic: Food Allergy (eczema and urticaria)
Program: Allergy Clinic in Action
Physician: Beatrice M. Kesten, M.D.
Dietitian: Irene Waters
Attendance: Limited to 15

Schedule of Trips

Tuesday, October 22

7:00 a.m. CENTRAL KITCHEN SCHOOL LUNCH PROJECT
(A trip through kitchens where school luncheons are prepared and packed for 100,000 children of families on the relief rolls)

7:30 a.m. FRUIT AUCTION AND WHOLESALE PRODUCE MARKET

6:00 p.m. TOUR OF CITY WITH CHINESE DINNER
(A bus tour of the city ending with a Chinese dinner planned by Mrs. Farn B. Chu, wife of a director of the American Bureau for Medical Aid to China)

6:30 p.m. FOREIGN DINNERS (Specially planned and conducted. Eleven different national restaurants have been selected and groups will be conducted to each by a hostess)

8:30 p.m. BROADCAST: "We, the People" (Limited to 75 tickets)

8:30 p.m. THEATRE PARTIES: (Choice of current plays)

10:00 p.m. TOUR THROUGH DAILY NEWS
(See one of New York's largest selling newspapers made from beginning to end)

Wednesday, October 23

7:30 a.m. WHOLESALE MEAT MARKET (With meat cutting demonstration)

4:30 p.m. VISIT TESTING KITCHENS:
Sealtest
American Can Company
Waldorf Hotel Kitchens
or
Woman's Home Companion
General Foods Kitchen

Thursday, October 24

7:30 a.m. WHOLESALE GROCERY HOUSE
(With demonstration of grading of canned fruits and vegetables)

12:30 p.m. VISIT TESTING KITCHENS:
Hotels Statler Inc., Food Research Department
or
Herald Tribune Testing Kitchens
or
Glass Kitchen—19 W. 44th Street

1:30 p.m. TOUR OF GOOD HOUSEKEEPING INSTITUTE

12:00 m. THE NATIONAL CONVENTION MARKET TRIP: including:
A large modern bakery and dairy plant
The Washington Fruit and Vegetable Markets
The Fulton Street Fish Markets
Breakfast at Horn & Hardarts

Friday, October 25

10:00 a.m. to 7:00 p.m. YALE DINING HALL: (Limited to 35; go to New Haven by bus; have luncheon at the Y. W. C. A. cafeteria and visit the dining halls at Yale University. Return to New York about 7:00 p.m.)

9:00 a.m. to 4:00 p.m. WEST POINT MILITARY ACADEMY: (By bus to West Point; go through the Academy, have late lunch at Thayer Hotel, and return)

Time to be announced in program: General Hospital Clinics with Tour of Hospital after Clinic
New York Hospital—525 E. 68th Street
Presbyterian Hospital—622 W. 168th Street
Post-Graduate Hospital—303 E. 20th Street

9:30 a.m. COMMERCIAL HOUSES
National Biscuit Company
Chase and Sanborn Coffee Company and Tenderleaf Tea Company
A Kitchen Equipment House

Time to be announced: SCHOOL LUNCHROOMS: (A tour of some of New York's largest and newest lunchrooms ending with demonstration at Teachers College at 2:30 p.m.)

10:15 a.m. WAITRESS TRAINING CLASS—Presbyterian Hospital

10:30 a.m. TRIP AROUND MANHATTAN ISLAND BY BOAT
(Leave Battery Sea Wall, South Ferry; About 3 hours)

11:00 a.m. METROPOLITAN LIFE INSURANCE COMPANY CAFETERIA (pending)
(Here 1400 staff and employees are fed in 1½–2 hours)

1:00 p.m. HUNTER COLLEGE COMMONS
(Where Alta Atkinson will be feeding 7000 students and faculty of Hunter College)

—SUSAN PAIGE, *1320 York Ave., New York.*

Theatre Tickets

Send reservations for theatre tickets for Tuesday evening, October 22, with check, to Doris H. Tisdale, Standard Brands Inc., 595 Madison Ave., New York. Reservations must be received before September 15. Please state clearly the title of the play, the price and number of seats desired, and also indicate your *first, second, third* and *fourth* choice of the following: Winter Garden Theatre, "Hellz a Poppin", balcony seats, $2.75, $2.20, $1.65; Empire Theatre, "Life with Father", balcony seats, $2.75, $2.20, $1.65; Alvin Theatre, "There Shall Be No Night", balcony seats, $2.75, $2.20, $1.65; Imperial Theatre, "Louisiana Purchase", mezzanine, $3.30, balcony, $2.75.

Exhibitors at the Annual Meeting—New York, 1940

Aluminum Cooking Utensil Company, New Kensington, Pa.
American Can Company, New York
American Dry Milk Institute, Chicago
American Stove Company, Cleveland
Armour and Company, Chicago
Battle Creek Food Company, Battle Creek, Mich.
Best Foods, Inc., New York
Borden Company, New York
Carnation Company, Oconomowoc, Wis.
Chicago Dietetic Supply House, Inc., Chicago
Chr. Hansen's Laboratory, Little Falls, N. Y.
Colson Corporation, Elyria, Ohio
Cream of Wheat Corporation, Minneapolis
F. A. Davis Company, Philadelphia
R. B. Davis Company, Hoboken, N. J.
Edison G. E. Appliance Company, Inc., Chicago
Fixt Products, New York
Florida Citrus Commission, Lakeland, Florida
J. B. Ford Sales Company, Wyandotte, Mich.
Fruit Dispatch Company, New York
General Foods, Inc., New York
Gerber Products, Fremont, Mich.
S. Gumpert Company, Inc., New York
Hawaiian Pineapple Company, San Francisco
H. J. Heinz Company, Pittsburgh
Hilker & Bletsch Company, Cincinnati
Hoffmann-LaRoche, Inc., Nutley, N. J.
Horlick's Malted Milk Corporation, Racine, Wis.
Johnson-Appleby Company, Cambridge, Mass.
Irradiated Evaporated Milk Institute, Chicago
Kellogg Company, Battle Creek, Mich.
Knox Gelatine Company, Johnstown, N. Y.
Kraft Cheese Company, Chicago
Libby, McNeill & Libby, Chicago
J. B. Lippincott Company, Phialdelphia
McGraw Electric Company, Elgin, Ill.
Macmillan Company, New York
Maltex Company, Inc., Burlington, Vermont
National Biscuit Company, New York
National Canners Association, Washington, D. C.
National Dairy Council, Chicago
National Live Stock & Meat Board, Chicago
A. F. Pattee, Publisher, Mt. Vernon, New York
Pet Milk Company, St. Louis
Prometheus Electric Corporation, New York
Quaker Oats Company, Chicago
Ralston Purina Company, St. Louis
Ad. Seidel & Son, Chicago
John Sexton & Company, Chicago
Standard Brands, Inc., New York
Standard Gas Equipment Company, New York
Tricolator Company, Inc., New York
Vegex, Inc., New York
Wander Company, Chicago
Wesson Oil & Snowdrift Sales Company, New York
Wisconsin Alumni Research Foundation, Madison, Wis.

EDITORIAL

PREPAREDNESS

Just a year ago, members returning from the Los Angeles meeting of the American Dietetic Association listened to the sad tidings of a state of war in Europe and the grave young voice of the King of England broadcasting to his Empire. We may have realized that this in reality was the voice of all the other English-speaking countries so closely akin to our own. Some of us, even then, may also have sensed the peril that ultimately was to reach many of our sister democracies. But war, for most of us, in August, 1939, was seemingly far removed. Now, within the space of one short year, one after another of these democracies has collapsed under the invading forces: Poland, Denmark, Norway, Holland, Belgium, Luxemburg, and France. It was the fall of France, that country which seemed to belong to all men who love individual liberty and the glories of our present civilization, which aroused us to the dangers which beset our own long held freedom. These cataclysmic changes have proceeded with a grimly fatalistic regularity. What the future holds for us will be written in the pages of history. Only one truth stands out: that in unity there is strength, and only the strong will survive.

America, finally awakened, is preparing for defense. In the wake of the first line of defense, the armed forces, must come that second line, those who heal and save lives and those who conserve the country's food supply. Already steps have been taken to organize hospital units for such purposes, equipped with doctors, nurses and the essential technical personnel. In June the American Medical Association, at the annual session in New York attended by more than 12,000 physicians, took significant action with regard to medical preparedness. They formed a Committee on Medical Preparedness and instituted a new section in their *Journal* devoted to the problem.

The task of enrolling that group entitled medical technologists by the Medical Department of the Army, has been entrusted to the American Red Cross. Dietitians in this group, which includes laboratory, physical therapy and x-ray technicians, and others, are listed as civilian employees. Possibly because of this unfavorable status in an organization which otherwise would be entirely militarized, the enrollment as of June 30, 1940, shows a certain paucity of response. Of 3274 announcements mailed to dietitians, just 96 applications had been received and a total of one male and 54 female dietitians had been enrolled. A like situation exists with the other groups. For instance, over 5000 announcements mailed to laboratory technicians netted a total enrollment of 8 men and 69 women.

The Sheppard Bill S3318 was designed to give these medical technologists rank and privileges commensurate to the responsibilities of their work, and comparable to those of Army nurses. More effective service could thereby be accomplished by the Army dietitian, whose status as a food administrator, responsible for preparation and service of

government food, would be largely nullified if she were to serve as a civilian employee among other personnel entirely militarized.

In this connection, Lenna F. Cooper, now Chief, Department of Nutrition, Montefiore Hospital, New York, and during the first World War, Supervising Dietitian in the Office of the Surgeon General of the Army, Washington, D. C., writes as follows:

> There is no other factor so important to the morale of a sick or wounded soldier as that of a well-prepared meal, and one adapted to his special needs. The War Department recognized this fact by engaging more than 350 dietitians in the last World War and by sending many of them overseas with hospital units. Yet the dietitian had no military status and no definition of her work or her responsibilities appeared in the Army regulations until late in the war. As a result, she had great difficulty in accomplishing the work for which she had volunteered her services. Authority looms paramount in a military organization. It is therefore hoped that before another war occurs, we shall be permitted to be of maximum service through having been granted the essential authority which military status, alone, can give.

The lesson of the European War has brought home the need of trained Army personnel in all branches of the service, and nothing should be placed in the way to deter the enrollment of dietitians whose highly specialized training has fitted them competently to handle a most important job—preparation, service, and conservation of food. There is no time for muddling or mule-like adherence to an antiquated concept of woman's place when a wartime job is to be filled for which a woman happens to be best fitted. There should be no place now in the War Department for reactionaries who would cling to the narrow viewpoint of 25 or more years ago. And it should be remembered that for every non-combatant job a woman holds in the Army, a man can be released for the armed forces.

Female Army nurses have won a place in that second line of defense to which they are unquestionably entitled. They possess a definite military rank which will enable them to serve effectively, unhampered by thought of the physical jeopardy in which they may be placed, and which conceivably might result in future incapacity as peacetime wage earners. Their military status safeguards them in this respect. None but the hopelessly prejudiced would expect the other essential trained hospital personnel to embark wholeheartedly on an uncertain and perhaps hazardous period of service, unprotected by the rights and privileges of other military personnel. That 55 dietitians have already volunteered is a real demonstration of fealty to their country.

Our neighboring democracy, Canada, has not been remiss in this respect. Canadian Army dietitians have been gazetted as commissioned officers. Let us hope that in this and in other more pressing aspects of preparedness, our War Department and our country will awaken to the need of a streamlined efficiency, unhampered by personal prejudice or political chicanery.

RED CROSS ENROLLMENT GIVES OPPORTUNITIES FOR SERVICE[1]

Together with its other services on behalf of national preparedness, the American Red Cross expanded the enrollment of dietitians for government service on May 31 of this year. Under this program qualified men and women will have an opportunity to perform an essential service to the nation's health and safety in the event of emergency.

The Red Cross will enroll dietitians who are willing to serve in the Army Medical Department. Their work in military hospitals will be much the same as in civilian hospitals. They will be called upon to prepare menus and diets and supervise food preparation and service for patients. They will also be required to instruct diabetic patients in measuring and weighing food.

"Dietitians", says the Office of the Surgeon General, United States War Department, "are primarily responsible for the proper performance of their duties to the Mess Officer, then of course to the Commanding Officer of the hospital. Since dietitians are civilian employees, they do not ordinarily have control over mess personnel. In some of the larger hospitals, however, personnel are specifically assigned to duty in diet kitchens and the authority of the Mess Officer is delegated to the dietitian in charge."

Dietitians who enroll and are accepted in an emergency will become part of the national defense effort. By so doing they will be using their qualifications and abilities for a necessary part of that effort. It is important to note that while the program is primarily directed toward Army needs, dietitians may be asked to work for the Red Cross as well in the event of emergency. A member of this reserve may be called upon for emergency feeding, instruction in food and nutrition, or in food conservation. Thus there is a possibility of service in peace as well as in war or preparation for war. Enrollment is not compulsory, but it gives the nation's dietitians a splendid opportunity to answer a call for aid in time of national need.

Mrs. Beula B. Marble, President of the American Dietetic Association, directly endorsed the program recently when she said: "I am sincerely interested in, and in favor of, the primary aims of enlisting dietitians in Red Cross service to humanity. Dietitians have much to contribute when the way is made clear for them to do so."

[1] *Editor's Note.*—This information was received from the office of Mr. J. Stewart Brown, National Director, Public Information Service, American Red Cross, Washington, D. C. The whole situation at present with regard to the enrollment of dietitians and their work is detailed in this and the preceding editorial and other papers appearing in this JOURNAL.

EDUCATIONAL DIRECTOR APPOINTED

The Executive Board of the American Dietetic Association announces the appointment of Gladys Hall (Silkey) as educational director, effective September 1, 1940, in the Chicago office of the Association. Prior to this appointment, a special committee under the chairmanship of Laura Comstock sub-

mitted a report concerning the employment of an educational director at the 1939 meeting of the Association, which was published in this JOURNAL for November 1939.

Since 1935 Miss Hall has been director of the Department of Dietetics, St. Louis University Hospitals, and prior to this for nine years she was first administrative assistant at Indiana University Hospitals. She holds the B.A. and M.S. degrees from Indiana University. Gladys Hall is exceptionally well fitted to take up her new responsibilities. As assistant dietitian at Indiana University Hospitals she had charge of main kitchen activities, food purchasing, menu planning, food production supervision, ward food service for adult and child patients, and employee management. She assisted with plans for the new food service units and medical school cafeteria, participated in the direction of the approved training course for student dietitians, and assisted in planning the curriculum in cooperation with Indiana University. At St. Louis University Hospitals she developed the dietetic instruction in the out-patient department and organized the dietetic training course for student dietitians, correlating work in the dietary units of Firmin Desloge and St. Mary's Hospitals and the St. Louis University Medical School Cafeteria. During their training student dietitians here receive fifteen hours toward the master of science degree. Miss Hall has been responsible for the teaching of four academic courses in St. Louis University for which graduate credit is given and has directed the students' work toward master's theses in diet therapy and administration.

As chairman of the Professional Education Section of the American Dietetic Association for 1939–40, Miss Hall has had an excellent opportunity to become acquainted with the professional and educational aims of the Association and with the general operation of the Association as directed by its Executive Board. Her ability in the field of administration and her knowledge of the educational field provide an exceptional background for her present responsibilities. Her modest demeanor and pleasing personality will enable her to make many friends for the Association.

THE FOOD STAMP PLAN[1]

The development of the Food Stamp Plan grew out of a search for still more effective ways of expanding the domestic market for the American farmer and combating malnutrition among millions of American families. Under this plan farm surpluses are moved through regular commercial channels by increasing the buying power of low income consumers, thus enabling them to secure these surplus foods. In addition to providing a wider market for the farmer and supplementing the diets of relief families, the stamp plan program helps business by bringing about an increased flow of foodstuffs through the normal channels of trade. It operates as an agency of the Department of Agriculture working in cooperation with the public relief agencies and the food industry. The plan for distributing surplus foods includes those certified as eligible for

[1] Based on an address by Alfred O. Wilmot, Federal Surplus Commodities Corporation, at the annual meeting of the Wisconsin Dietetic Association, Madison, March 29, 1940.

WPA, and for old age assistance, aid to dependent children, aid to the blind and those receiving direct cash relief. These persons receive free blue surplus stamps providing they buy orange-colored food order stamps with a part of their assistance checks. Orange stamps are purchased at the rate of $1.00 minimum and $1.50 maximum per person for a weekly period. The orange stamp purchaser receives free blue surplus stamps at the ratio of one-half the amount of orange stamps purchased. How can people on direct relief purchase these orange stamps? In Madison, Wisconsin, for example, the person on direct relief receives from the welfare department case worker a stamp order voucher which is presented at the stamp distributing office. In a two-week period a family of four on direct relief would receive a stamp voucher calling for the purchase of $12.00 worth of orange stamps and $6.00 worth of free blue surplus stamps. In the first instance, the city or county purchases the orange stamps from the Federal Surplus Commodities Corporation out of an established revolving fund used solely for this purpose. The blue stamps are disbursed free and redeemed by the government from the same funds that are now used to purchase surplus commodities directly.

Orange stamps can be used in the purchase of any food sold for human consumption but may not be exchanged for tobacco, wine, liquor, beer or other alcoholic beverages or for household necessities. The blue surplus stamps are used solely in the purchase of surplus commodities. Any agricultural product designated by the Secretary of Agriculture as a national surplus is termed a surplus commodity. At the time of writing, the list included butter, raisins, rice, lard, all fresh cuts of pork, corn meal, shell eggs, dried prunes, fresh pears, apples, oranges and grapefruit, hominy grits, dry beans, onions, and whole wheat flour.

Every blue stamp means additional purchasing power for the community and a more nutritive diet for the needy, added sales for the grocer and better prices for the farmer's products. Thus the stamp plan increases the rapidity of the flow of money and raises the standard of living for those who are in need.

In summary, the Food Stamp Plan is a necessary stop-gap measure. The man receiving public assistance has to live on about 5 cents a meal. If he is fortunate enough to live in a community where the Stamp Plan is operating, he lives on 7½ cents a meal. When it is possible for him to go off relief and get a job at good wages, he spends about 12 cents a meal. Every time an unemployed man gets a job, some farmer in America has cause to be thankful. After all, the employment of the city consumer is the answer to the surplus problems of the farmer.

CURRENT COMMENT

FEDERAL SURPLUS COMMODITIES AND SCHOOL LUNCHES

THELMA TUBBS CURRIER

During the past school year over two and a half million undernourished children throughout the country shared in the distribution of surplus commodities, through participation in a widespread school lunch program. The Federal Surplus Commodities Corporation, an agency of the Department of Agriculture, recognizing the great value of school lunches for undernourished and underprivileged children, and appreciating the existing need, has encouraged this participation in the distribution of surplus commodities and has made commodities available to interested schools since the inception of its program.

Other countries have established school lunches; but 1939–40 is the first year that all of the states in this country have entered into the program. The program has been furthered by the cooperation of state boards of education, state boards of public health, parent-teacher associations, local school authorities, and various government agencies.

Changes in modern living have encouraged the establishment of school lunches. The number of women employed outside of the home, the consolidation of rural schools and the one-session school day, necessitate the eating of the noonday meal at the school. Ideally, from one-third to one-half of the food requirements for the day should be provided in the child's noonday meal. A well-balanced lunch promotes better health which, in turn, encourages improvement in scholarship, deportment, and attendance. Many school superintendents and school nurses will agree that too often the child who goes home for lunch fares less well than the child who carries his lunch in whole or in part, or who eats the lunch provided at the school.

According to a study of incomes from 1935–36, made by the Bureaus of Home Economics and Labor Statistics in cooperation with the National Resources Committee and Works Progress Administration, nearly two-thirds of the families in the United States had an income of less than $1500 and one-third had an income of less than $780. For this latter group the mean income was $471 or less than $40 a month for an entire family. This study indicates that many families have an inadequate allowance for food, which means that a large number of the children of school age are improperly fed.

Mrs. Mary deGarmo Bryan recently stated that approximately one-half of the school children have some kind of food given to them at school. According to recent estimates of the Office of Education, there are probably twenty-nine million school children in the United States. For some time milk programs have been carried on in the schools by local service groups and Red Cross chapters. These programs have been expanded in some instances to include a hot dish as supplemental to the lunch carried by the child, and in other instances they have been the incentive to local groups to provide a full lunch. To operate successfully and

on a permanent basis, a school lunch program must be underwritten by a responsible group which is in a position to secure the proper space and equipment as well as the necessary food in addition to surplus commodities for the preparation of well-balanced meals.

The Corporation has encouraged the preparation of lunches in all types of schools; however, some schools are not equipped to prepare full lunches although they have been determined as eligible for surplus commodities by the local certifying agency. For such schools commodities which do not require cooking, such as fresh and dried fruits and fruit juices, are made available for use at breakfast, recess lunch, or to supplement noonday lunch. While the complete lunch is ideal, the benefit derived from the supplementation of breakfast and lunch in schools, where facilities do not permit a full lunch program, should not be underestimated.

The Federal Surplus Commodities Corporation has established the following terms under which schools may receive surplus commodities to be used in school lunches:

> A school, to become eligible for surplus commodities, must be supported by funds derived from federal, state or local government sources. Other schools supported in whole or in part with funds provided by educational, religious, or charitable organizations may, at the discretion and direction of state or local certifying agencies, be determined eligible for surplus commodities in connection with school programs.
>
> Schools within these general classifications which make application to state welfare agencies for surplus commodities must present evidence of malnutrition and/or actual need of the children within that school. The eligibility of each school is then determined by the approved state or local certifying agency upon which the responsibility for proper investigation and certification rests.
>
> The school or other sponsoring agency must operate the lunch program on a nonprofit basis to become eligible for surplus commodities. Any school serving lunches on a contractual basis, through a concessionnaire, or wherein there is any element of profit from operations except that which is reinvested in the operation of the lunch program, is ineligible to participate in the distribution of surplus commodities.
>
> The method and manner used in serving lunches to school children must not segregate the children in any way that would indicate a distinction between the paying and the nonpaying children.
>
> Where, in the preparation and serving of lunches, it becomes necessary to commingle the surplus commodities with additional commodities supplied by the sponsor, a charge may be made to the paying pupils for the portion of the meal served to them, provided: (*a*) that there has been a proper determination by the state or local certifying agency of the number of pupils within the school eligible to receive free lunches, and that the percentage of paying and nonpaying pupils has been established; (*b*) that the total of the surplus commodities allocated to the school does not exceed the maximum amount allowed for all eligible children; and (*c*) that the sponsoring agency will supplement each surplus commodity with a quantity of the same commodity equal to the amount of the surplus commodity served to the paying children.

State welfare agencies may cancel future allocations of surplus commodities to school lunch programs when there is any evidence of mismanagement or improper use of surplus commodities.

As a result of the interest shown this year by schools and communities, the Corporation looks forward to a greatly expanded program during the school year of 1940–41.

THE AMERICAN DIETETIC ASSOCIATION PLACEMENT BUREAU

DOROTHY I. LENFEST

During the first three quarters of this fiscal year, from September 1 to June 1, 402 positions were referred to the Association, compared with 274 for the same period last year. This 402 plus 58 positions which were held open at the beginning of the year, make a total of 468 positions, in addition to government positions in Illinois for which the Association has been asked to suggest candidates.

The number of members registering in the Placement Bureau for the same period was 187, compared with 179 last year. In spite of the fact that questionnaires were sent to members registered previously, asking whether they would consider changing positions, only 202 former registrants asked to be notified of positions, compared with 169 in the same period last year. Of 73 new registrants placing their papers on file between March 1 and June 1, 34 were students in approved training courses who were not available for positions until after July 1. On June 1 there were less than 50 unemployed available people registered in the Bureau, including persons restricted to one locality and others presenting special placement problems.

By June 1, 157 placements had been made for which a fee had been paid, leaving 115 positions still open. The figures showing the number placed by the Association is not indicative of the number of members securing positions in this period. Both college departments and directors of approved training courses, as well as the Association, are recommending registrants, and frequently the same registrants for the same positions. Frequently, too, registrants already have positions when they register in the Bureau; and students often almost immediately secure positions through the institution in which they have received training. The divergence in salaries offered persons with the same type of background creates difficulty in helping members to move from one position to another; or to put it in another way, makes it time-consuming to find experienced dietitians for positions requiring two to five years' experience. There is frequently a difference of 50 per cent in the amount of salary offered for the same position. The salary which seems to be paid most often to students just completing training is from $75 to $80 a month with complete maintenance, but a number of students just completing training have received from $90 to $100 with complete maintenance.

The Bureau has worked with the WPA in Illinois, filling several hospital positions and one school lunch position. The National Youth Administration asked the Association's help in securing someone to organize homemaking classes.

Approximately 70 per cent of the

positions referred to the Association were from private hospitals. The greatest increase in vacancies in other fields was in state institutions. In addition to the hospital positions in the WPA in Illinois, 19 in state hospitals and 6 in state schools were referred in the period covered by this report. The college positions included administrative positions in dormitories and student unions and two positions for teaching only. Public health calls came from both public and private agencies. We were also asked to suggest registrants for summer camps, industrial and school cafeterias, demonstration work, and for administrative positions in department store restaurants.

OPPORTUNITIES FOR DIETITIANS[1]

ALICE P. SELLS

At the Office of Placement Service, Teachers College, Columbia University, during the last six months we have had 127 calls for dietitians with a salary range of $500 a year plus maintenance and travel to the field in a mission school in Sitka, Alaska, to $3000 for managing a school cafeteria in a degree-granting institution near New York. This cafeteria is run entirely with student help and serves the public as well as the students. In addition to management of the cafeteria, several classes in institution management must be taught.

These 127 calls came from 25 states, as far west as New Mexico and California, as far south as Louisiana and Alabama, as far north as Michigan and Wisconsin, and from the District of Columbia, Alaska, Venezuela and Canada. The greatest number of openings (38) are in schools and colleges. Here, too, the highest and the lowest salaries are paid. While the mission school in Alaska was mentioned as offering the lowest salary, there were two calls from colleges, one on the east coast and one on the west, for inexperienced young women as assistants at salaries of $40–50 per month plus maintenance for 9 months. Here those interested would have an opportunity of doing practical work under an experienced dietitian, a situation somewhat comparable to that of a student dietitian in a hospital without, of course, the classes in nutrition, accounting and so on which are given in the approved courses in hospitals.

Among the college calls many positions are for dietitians only. Others combine food management with institution management (including housekeeping), and teaching in this field or in nutrition. One college in Pennsylvania even asked the dietitian to teach a course in elementary clothing construction. On the whole the salaries offered by the colleges are better and the vacation periods longer than in any other group.

Thirty-two calls came from hospitals, the salary range being $54 per month plus maintenance and laundry in a state hospital, to $150 per month plus maintenance as an administrative dietitian. Of these 32 calls, 6 permitted the dietitian to live outside the hospital.

Twenty-six commercial restaurants came to us for dietitians, two suggesting an investment in the restaurants and a share of the profits. The lowest salary offered an assistant in this field was $18

[1] Read before the Virginia Dietetic Association, Cavalier Hotel, Virginia Beach, April 26, 1940.

per week. A number of the calls were at $25 per week. A New England Y. W. C. A. paid $2700 plus meals while on duty. The cafeteria director here also operated a spa and served banquets and special parties. A Woman's City Club in the Middle-west offered a club manager $2100 per year. She "must know superior food, be economical, be able to manage help and put on large parties".

Institutions such as homes for the aged, homes for crippled children, convalescent homes, and so on, sent in 12 calls. Salaries ranged from $50 a month and maintenance to $2500 a year plus meals but no room. In the latter instance 1400 people were served 3 meals per day. One home for aged men requested a dietitian "not too young and not too talkative".

Eight commercial food companies requested demonstrators at salaries from $18–25 per week up to $2100 plus travel expenses.

Six high school cafeterias desired managers, one in the deep South at $1150 for 9 months. Three high school cafeterias in the East paid $2000. One position paying $1300–1500 required the teaching of "domestic science" as well as cafeteria management.

There were 5 calls for research workers in the commercial food field. The average salary for these positions was $30 per week. One required a knowledge of Japanese cookery.

For the past 10 years there has been far greater opportunity in the vocational than in the academic fields. Home economics continues to offer the greatest variety of positions and the greatest opportunities for women. In this field there is practically no competition with men—here women are not taking men's jobs, according to Mrs. Chase Going Woodhouse, but are doing outside the home a work which bears a close relation to that which their grandmothers did in the home.

Some of the 127 calls mentioned had special requirements such as: "a slight knowledge of French" (in a hospital in Montreal); a "practicing Christian Scientist" in a school in Missouri; a "Jewish dietitian" in a sorority house in New York State: a "Protestant, Presbyterian preferred" in a mission school in North Carolina. Race and religion are factors in securing some positions as are age, training, experience and personality. Given the proper professional preparation, a cooperative attitude and a will to work, no dietitian should have too great difficulty in finding a position. But this does not mean that she may immediately attain the position she prefers. I am reminded here of the two weary negro boys, one lying on the ground, the other leaning against a tree. The boy on the ground opened his eyes and addressed his drooping companion, "Boysie," said he, "if'n you wants to lie down youse is goin' to have to make an effort".

NUTRITION EDUCATION BY BRAILLE

FRANCES LIVINGSTON HOAG

Eighty-five per cent of our mental perceptions reach us through our eyes, we are told by the psychologists of education. Therefore alert teachers have made as much use of valuable illustrative material and visual aids as possible, limited of course by time and the expense involved in securing them. But what of our blind students—those

in foods and nutrition classes? What of their mental perceptions?

Margaret Deaver, a student at Drexel Institute of Technology, is preparing to teach home economics in the school for the blind from which she herself graduated. Quite undaunted by her problem, she has collected illustrative material for her nutrition teaching and is transforming some of it into Braille. For these "visual aids" are for girls who see only through their sensitive fingers.

For this purpose the life-size food models[1] prepared by the Pennsylvania Museum Extension of the WPA, under a nutrition advisory committee, are exceedingly useful. The models correspond to the portions usually considered as average servings, thus lending themselves to menu building and groupings for all sorts of economics and nutrition study. Going further into the nutrition values, Miss Deaver has been translating the graphs[2] for the nutrition values of many of these foods into Braille.

For the correlation between the food models and their nutritive values, Dr. Rose's calibrations which she christened "shares", make the translation into Braille possible through the simplification of the units involved. Each share of protein, minerals or vitamins corresponds in an amount to balance a share of energy or each 100 calories needed, and can be easily represented by graphs. This system has the advantage of sustaining the visual picture of the individual food values as measured against the goals set for any individual diet.

Miss Deaver explains that, "In Braille the share is made up of ten Braille units, making it possible to express the value in as little as one-tenth of a share. Each of these ten units consists of ten dots contained in one cell of the metal guide on the Braille slate. Thus they are not confused with letters.

Each share is represented as a row of block-like figures, ten in number, each of which contains six tiny raised dots. These blocks, or shares, are connected for the sake of clarity by the Braille hyphen, appearing as a short line of two dots.

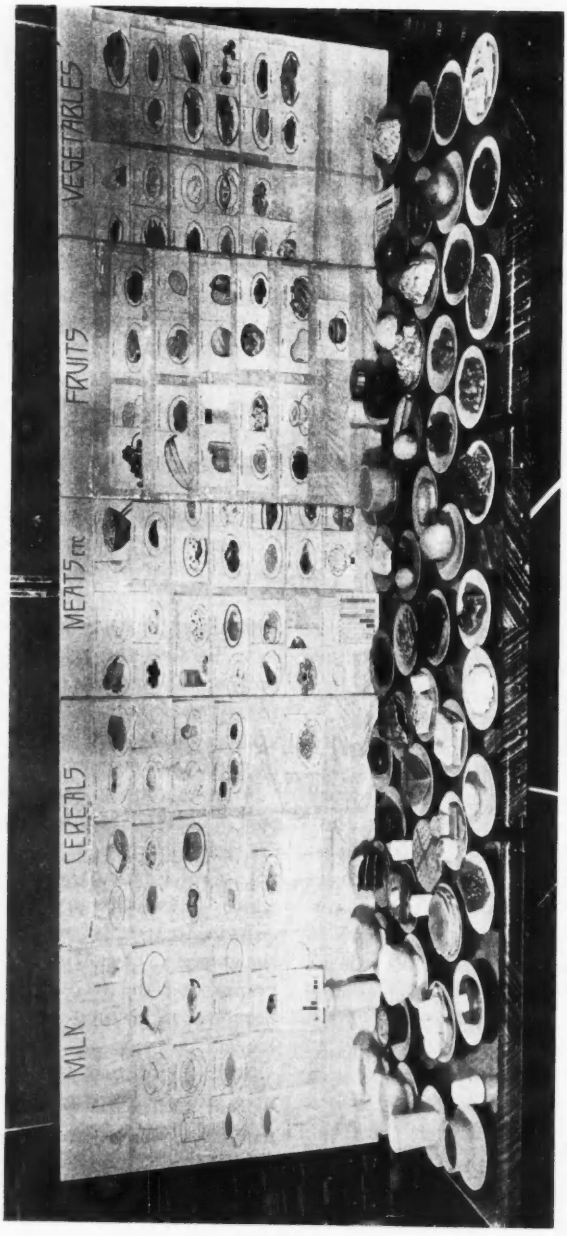
For example, the Braille translation of 1.5 shares appears as a row of ten dotted blocks, joined to a row of five dotted blocks by a dotted line." Miss Deaver makes her graphs by hand on a Braille slate because the graphs (*see* illustration) are of necessity long and she runs them horizontally across the page. A vertical graph could preferably be made by a Braille machine.

After building up a background on the part of her students, these Braille graphs are very effective in showing the nutritive value of each of these foods as a whole. Blind girls in school and adults outside are equally enthusiastic about the graphs. Thus Miss Deaver's Braille graphs and the food models permit a new mental concept for these blind students.

It is hoped that the Braille graphs may later be prepared for distribution. Possibly high school club groups who specialize in translating into Braille might be persuaded to cut these graphs. By so doing they would learn much

[1] The 50 Food Models are available only in Pennsylvania to tax-supported institutions.

[2] The printed food cards and graphs by author may be obtained from her at 20th and Race Streets, Philadelphia, 50 cents postpaid for set of 128 cards, 2 manuals and a chart.



FOOD MODELS AND GRAPHS

themselves about the values of these familiar foods.

VITAMIN C IN PACKAGED FOODS PURCHASED IN RETAIL MARKETS[1]

K. R. NEWMAN AND C. R. FELLERS

Does the nature of the container affect the retention of vitamins in canned foods? This question has been asked many times.

This study involves vitamin C. In the course of laboratory studies of commercially canned foods, samples of both glass and tin-packed fruit and vegetables were obtained from markets in Chicago, San Francisco, New York, Boston and Rochester, New York. An effort was made to obtain samples of foods in both types of container from the same market. Twenty-one different foods were represented. Of the 118 individual samples examined, 52 were glass-packed and 66 in tin cans. All were of normal appearance.

TABLE 1

Ascorbic acid (vitamin C) in canned foods as purchased

PRODUCT	NO. OF TINS	ASCORBIC ACID, AVERAGE	NO. OF GLASS JARS	ASCORBIC ACID, AVERAGE
		mg./g.		*mg./g.*
Apple juice	1	.005	3	.008 (.005–.011)
Apple sauce	3	.008 (.003–.012)	2	.010 (.0 –.02)
Grapefruit juice	3	.43 (.33 –.54)	1	.39
Orange juice	2	.38 (.29 –.46)	2	.26 (.097–.43)
Tomato juice	6	.102 (.08 –.16)	5	.106 (.10 –.15)
Tomatoes	3	.126 (.11 –.15)	4	.15 (.11 –.19)
Carrots	6	.02 (.008–.04)	5	.016 (.009–.045)
Wax beans	5	.043 (.012–.11)	4	.04 (.02 –.09)
Asparagus	3	.058 (.02 –.09)	3	.049 (.016–.10)
Sauerkraut	3	.082 (.05 –.15)	1	.075
Lima beans	4	.048 (.012–.07)	4	.048 (.02 –.09)
Sweet corn	7	.027 (.008–.07)	3	.03 (.007–.06)
Rhubarb (sauce)	2	.02 (.02)	1	.026
Squash	2	.025 (.02 –.03)	1	.027
Peaches	3	.038 (.018–.048)	3	.03 (.01 –.04)
Pears, Bartlett	4	.016 (.0 –.04)	4	.015 (.008–.025)
Green beans, strained	2	.045 (.04 –.05)	2	.024 (.024)
Spinach, strained	2	.046 (.025–.067)	1	.063
Peas, strained	2	.096 (.06 –.1)	1	.081
Carrots, strained	1	.042	1	.034
Prunes, strained	2	.031 (.007–.055)	1	.024

Note: .05 mg. of ascorbic acid is equivalent to 1 I. U. vitamin C.

Vitamin C (ascorbic acid) determinations were made on samples immediately after opening the container. The 2, 6, dichlorophenolindophenol dye technic of Bessey and King (1933) as modified by Maclinn and Fellers (1938) was used in the analyses. The ascorbic acid values for prunes and rhubarb were determined by electrometric titra-

[1] Received for publication, May 15, 1940. Contribution No. 382 Mass. Agr. Experiment Station.

tion modification of Kirk and Tressler (1939).

Gas analyses of the individual jars and cans of foods were carried out using a modified Orsat gas apparatus. No gaseous oxygen was present in any of the containers. In both tin and glass containers, the oxygen originally present had combined with either the contents or container. Unpublished data show that the oxygen disappears from canned foods within a month after canning. High storage temperatures accelerate the disappearance of the oxygen which combines with any ascorbic acid present as long as the former exists in reactive form. Therefore, to the extent that oxygen is present in canned foods, ascorbic acid is oxidized and inactivated. Further losses of ascorbic acid from canned foods are small. It is evident that the oxygen content should be reduced by all possible means such as de-aeration, vacuum-sealing and the avoidance of excessive amount of headspace in the container during the packing process.

In presenting table 1, the authors are well aware of possible criticism in giving mean values for ascorbic acid content. However, the variations are also given. In most cases the values for glass and tin containers overlap. While the mean values given for container type may not be fully valid, the authors feel that with a random sampling such as this the values as stated for ascorbic acid content fairly represent what a customer might expect in purchasing canned foods in public markets.

The data in table 1 are largely self-explanatory. In certain instances extremely small differences exist and where the number of samples is too few, it is hardly fair to state that one container is superior to another in retaining vitamin C. Twelve products in tin containers contained slightly more vitamin C while 9 packed in glass were somewhat higher. In very few instances could the data be considered significant. The extreme variability of the products, methods of packing and length of storage are apparently far more important in determining vitamin C retention in canned foods than is the type of container.

Conclusion. In random sampling of canned fruits and vegetables in public markets, the vitamin C content is not significantly different in glass-packed and tinned foods. Uncombined oxygen is absent from most canned foods offered for sale.

NEW ENGLAND REFRESHER COURSE

GERTRUDE T. SPITZ

When I was in London in 1937 I visited many of the hospital dietetic departments. At King's College Hospital they told me of a two-day lecture series in dietetics the British Dietetic Association was to sponsor in the fall, to be called a "Postgraduate Refresher Course in Nutrition." In the newspapers and posted on the billboards I saw notices of a "Refresher Course for Physicians and Surgeons." The name was striking and self-explanatory: to attend meetings to refresh oneself in one's chosen field, by association with other workers, with stimulating minds. With the name still "fresh" in my memory, I suggested it to Mrs. Marble when in 1938 she discussed plans for an institute sponsored by the Massachu-

setts Dietetic Association. The name and the idea caught on and last May the Association undertook another refresher course.

Unlike the first course where an effort was made to reach only hospital dietitians in Massachusetts, this time an attempt was made to reach not only hospital dietitians but all workers in the field of nutrition in the New England states. Emphasis was laid on the fact that basically the same problems confronted all. While it was necessary for workers in restaurant or hospital food service to know menu planning and food selection, it was just as essential for the worker in the food clinic or welfare organization to be able to plan menus for the family. Cost and competition loom paramount in the hotel dining room but are also important factors in the non-profit institution. School lunches and nutrition education, too, are the concern of every citizen. Thus the program carried a message directed to "Nutritionists and dietitians who 'feed the world' in school cafeterias, industrial or college lunchrooms, private schools or college residence halls, small and large hospitals, community and welfare organizations and restaurants (all types)".

By April 1 almost a thousand letters had gone out to hospital superintendents, school principals, college and private school presidents, asking them to send their dietitians. At the same time a letter went to the hospital dietitian, school and college lunchroom manager, public health nutritionist, hotel and restaurant dietitian, enclosing a tentative program and requesting an initial registration fee of $1.00. The program included a list of observation and field trips to hospital dietary departments, schools, colleges, restaurants and markets.

Since the aim was to have a diversified program and to have the registrants attend all meetings, various subjects were scheduled each day. Because of the possibility that school lunchroom managers would not be able to attend all the week's sessions, the program was arranged to include subject matter of particular interest to them, but of interest to all, both at the beginning and the end of the week, and the course was offered at half the fee for half the week.

The replies to the first notices were gratifying and enthusiastic. Many sent letters of appreciation along with the registration blanks, particularly those who were not eligible to membership in A. D. A. or M. D. A. but who wished to keep abreast of new developments.

More than half those approached in Massachusetts attended; nearly all from Rhode Island, and a few from Connecticut, Maine, New Hampshire and Vermont. In addition, there were many single admissions granted those whose schedule permitted limited attendance. Of the 185 registrants, about half represented hospital dietitians. There were 11 teachers, 34 school lunchroom managers, college and private school resident managers, and a scattering from hotels, public health and welfare organizations; over 100 were present at most sessions. Single admissions, fifty cents, numbered almost as many as course registrants, the fee for which was $3.00.

BOOK REVIEWS

Proximate Composition of American Food Materials. By Charlotte Chatfield and Georgian Adams. Washington, D. C.: Bureau of Home Economics, U. S. Department of Agriculture, 1940, pp. 91. For sale by the Superintendent of Documents, Washington, D. C. Price 15 cents.

Bulletin 28, that compendium which has served the dietetic profession for over 40 years, may now take a well-earned rest on the shelf dedicated to other classics in the field of nutrition. This bulletin was the most popular vade mecum ever used by dietitians and nutritionists all over the world and wherever diets were carefully calculated. It served also as the source of food values in innumerable later books.

Now the Bureau of Home Economics announces the 1940 version—a new and much more comprehensive set of values covering over 1100 plant and animal foods found in American markets. The new circular includes under one cover *average* values on the composition of an extensive list of natural and processed foods of animal and plant origin, which furnish a working basis for diet calculation, but do not give any information with regard to the variability of foods. For this and other technical information the present tables must be supplemented by earlier tables published by the Bureau. The present bulletin will be indispensable, of course, to all dietitians.

Food and Life: Yearbook of Agriculture, 1939. United States Department of Agriculture. Washington, D. C.: Government Printing Office, 1939, pp. 1165. Illustrations. For sale by the Superintendent of Documents. Price $1.50.

One-third of this book is devoted to human nutrition and the remainder to animal nutrition as it ranges from the care and feeding of a puppy to the feeding of lambs for maximal growth at desired age levels, and the nutrition of fur-bearing animals. Since our knowledge of human nutrition is based largely on animal experiments and units, and with the similarity in basic requirements for all forms of animal life, actually the entire book is of value to those interested in human nutrition alone or a specific phase of animal nutrition.

In his foreword Henry A. Wallace writes: "Of all the sciences and arts, one of the greatest is the feeding of animals and human beings. Forty years ago, the scientists thought the problem simple—discover the needs for protein, fats, carbohydrates and a few minerals, analyze the foods for these substances, and then so blend the foods as to furnish an adequate supply of each. Today we know that there is much more to it than this. The old science is still fundamental, but the new science is continually adding to it knowledge of a whole array of substances—minerals, vitamins, amino acids—needed by the body. . . . The lack of common sense knowledge of nutrition, even among many well-to-do people in the United States, is appalling."

Gove Hambidge, in the preliminary summary of this book, has condensed in an understandable and concise manner the salient points from each detailed discussion. In reality this constitutes an abridged text of the whole book, one which in itself could well be a complete and separate volume. No better outline of the contents of the book could be given than his two paragraphs as follows: "Part 1 deals with human nutrition . . . giving the main facts about the functions of the nutrients in foods; then a group of general articles on human attitudes toward food. Next there are four articles on human requirements for carbohydrates, fats, energy, protein, minerals and vitamins. These articles cover more than requirements, however, they tell a good deal about the nature and functions of the substances they deal with and some of this information is basic in animal as well as human nutrition. Following them, two articles deal with the content of these nutrients in actual food materials. Then comes an article analyzing our present diets in the United States, and one showing how these diets could be improved by practical methods that almost anyone can follow. Next there is a group of articles on subjects relating to food preservation and consumer safeguards. The section ends with discussion of the broad economic aspects of nutrition in the United States.

"Part 2 deals with animal nutrition. An introductory article gives some fundamentals that connect soil and plant management with animal and human nutrition; this is followed

by an article on the digestive processes of animals."

Under each chapter or section there can be found the latest and most sound information on the subject under discussion, written by one of the ablest workers in each field: Lela Booher, Hazel Stiebeling, Paul Howe, Helen Mitchell, Breese Jones, Henry Sherman, Sybil Smith and many others.

The book would have definite value for its bibliography alone, since well over one thousand references are cited. The chapters are illustrated with a sufficient number of pictures, tables, and graphs to emphasize the points of interest and to relieve the monotony of continuous text. The index is liberally cross-indexed so that one may readily find desired information.—ESTELLE E. HAWLEY, PH.D., *Department of Pediatrics, University of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

Diabetes. Practical Suggestions for Doctor and Patient. By Edward L. Bortz, M.D. Second edition. Philadelphia: F. A. Davis Company, 1940, pp. 296. Price $2.50.

This is one of the many handbooks for diabetics which attempt the difficult task of meeting the needs of the physician, student and patient. It appears to have been written primarily for the patient, yet we find such terms and phrases used without adequate definition as: multiple glandular influence, physicochemical, photosynthesis, senescent, serum prolan, estrin, progestin, etc. Further, while the patient undoubtedly needs to know something of the symptoms of diabetic coma, his normal peace of mind will not be furthered by a possibly hypochondriacal concern over the fine points in the differential diagnoses of coma (acidosis), insulin shock, acute alcoholism, apoplexy, uremic coma, concussion and poison (156–159). We question, too, whether the average diabetic needs to study highly realistic drawings of gangrenous feet, perforating ulcers of the big toe, or carbuncles of the neck. With such contingencies in the offing, how could this average diabetic follow the advice on p. 71 and "forget his diabetes"?

Aside from the above, the book is essentially a thorough and interesting summary of our present knowledge of diabetes. The chapter on insulin has been entirely rewritten in this second edition with special emphasis on the use of protamine zinc insulin. Sister Maude Behrman, dietitian-in-chief at the Lankenau Hospital, has contributed a commendable section on diet and diet therapy which includes simple directions for diet calculations, methods of making a diet survey, and several special recipes.

Fruit Pectins. Their Chemical Behavior and Jellying Properties. By C. L. Hinton. New York: Chemical Publishing Co., Inc., 1940, pp. 96. Price $1.75.

This report is based on work carried out during a period of several years. It will be of real value to those who are working on the many problems associated with pectin. The contents include: the characterization of pectins; measurement of the jelly-forming capacity; preparation of specimen pectins from fruits; the effects of heating on the properties of pectins; changes in pectins due to the action of pectase; the effects of alkalis, acids and salts on pectins; and factors modifying the jelly-forming properties of pectins during their extraction from fruits.

Food Value Charts. Philadelphia: Philadelphia Child Health Society, 311 South Juniper St., 1940. Set of 12 charts, 50 cents.

In 1938 a set of six charts emphasizing minerals and vitamins in certain foods was printed at the request of various professional groups. Their use for two years in clinics, classrooms and homes has resulted in many suggestions for additional material.

The present set of twelve has been prepared with the cooperation of nutritionists and dietitians in Philadelphia and the Bureau of Maternal and Child Health, Department of Health, Pennsylvania. The aim has been to emphasize foods which give health protection at low cost and those which are often available as surplus commodities. The values are given in terms of commonly used servings, and additional data are printed on the backs of the charts.

CURRENT LITERATURE

American Journal of Digestive Diseases

Vol. 7, May 1940

*The maximal acidity of the intestinal contents during digestion. J. E. Thomas.—p. 195.

*Psychic gastric secretion in man. A. L. Bloomfield.—p. 205.

*Studies in human biliary physiology. IV. Comparative effects of orally administered olive oil, oleic acid and glycerine, with and without bile salts, on quantity of bile secretion. I. C. Zuckerman, M. Jacobi, B. Kogut and B. Klein.—p. 208.

Some remarks on habitual constipation and related nervous disorders of the rectum. J. Bauer.—p. 210.

*Chewing as an aid to relaxation. Editorial.—p. 219.

*The protection of the hepatic parenchyma. A. M. Snell. —p. 219.

Diet and cancer. Editorial.—p. 220.

A component of beef injurious to uremic rats. Editorial. —p. 221.

*Equivalents of epilepsy. Editorial.—p. 222.

Vol. 7, June 1940

Contributions made in 1939 to knowledge in regard to the pancreas. R. Elman.—p. 227.

*Influence of raw banana and apple upon the disappearance of complex carbohydrates from the alimentary tracts of normal children. M. L. Shepherd, F. C. Hummel and I. G. Macy.—p. 248.

*Dysphagia ascribed to vitamin B deficiency. I. R. Jankelson.—p. 252.

Therapy of chronic gastritis. R. Schindler.—p. 254.

ACIDITY DURING DIGESTION. Under conditions designed to produce the maximal normal acidity in the intestinal contents during digestion, the acidity in the duodenum near the pylorus rarely exceeded *p*H 3.0 and was generally near 4.0. The acidity was less in other parts of the duodenum and upper jejunum.

PSYCHIC GASTRIC SECRETION. The effect of suggestion of palatable food on gastric secretion measured under controlled conditions is described. The food was not actually seen, smelled or tasted. In 12 out of 14 subjects suggestion alone was followed by an accelerated flow of gastric juice.

HUMAN BILIARY PHYSIOLOGY. Oleic acid, orally administered with an average mixed diet, stimulates the flow of liver bile in a cholecystectomized healthy human. Administered together with bile salts, oleic acid potentiates the choleretic effect of the bile salts beyond the additive effects of each of these stimulating agents. Olive oil neither stimulates the flow of liver bile nor potentiates the choleretic effect of bile salts. Glycerine had a slight choleretic effect.

CHEWING FOR RELAXATION. Workers were watched without their knowledge throughout the working day and were rated from time to time on a scale of motor restlessness. The subjects all reported themselves as feeling more relaxed while chewing. Tension seemed thus to be reduced from 10 to 15%. Chewing while working did not interfere with the output. In number-checking and typing it improved the output.

PROTECTION OF HEPATIC PARENCHYMA. A proper diet for hepatic disease should include a liberal supply of protein from milk, eggs and vegetables, in addition to the increased content of carbohydrate. Fat should be moderately restricted. Cellular deposits of fat render the cells vulnerable to toxic agents.

EPILEPSY. Some of the relatives of epileptics show peculiar nervous disorders and problems of personality which seem due to the same irritability and explosiveness of temper which characterize their stricken relatives. Brain wave patterns characteristic of epilepsy can be found in at least 1 out of 4 of the parents and siblings of epileptics. Many of the problem children who go into spells of temper and unmanageableness have brain-storms with the abnormal waves that are typical of epilepsy.

INFLUENCE OF RAW BANANA AND APPLE. The disappearance of unavailable carbohydrates from the alimentary tracts of 9 normal children was determined during pre-experimental periods of 30 to 55 consecutive days for each child and experimental periods of 20 to 50 consecutive days immediately following for each subject. All of the children received an additional 100 gm. of banana per day in the experimental regimen. The addition or substitution of conservative amounts of banana did not change the caloric intake of any subject more than 4 calories per kg. of body weight. Variations of the individuals in disappearance of fiber from the tract are shown to be characteristic and are related

to the proportions of lignin, cellulose and hemicellulose in the daily diet more closely than to total quantity intake of fiber, although the form in which the unavailable carbohydrates are ingested and other factors probably play an important part in determining the physiologic response to altered intake of unavailable carbohydrates.

DYSPHAGIA ASCRIBED TO VITAMIN B DEFICIENCY. Six cases of dysphagia caused by vitamin B deficiency and relieved by adequate vitamin B administration are reported. The diagnosis is made on careful analysis of the dietary habits of the patient, the absence of other causes of dysphagia and the response to adequate vitamin B therapy.

American Journal of Diseases of Children

Vol. 59, May 1940

*Congenital cranial osteoporosis: Its etiology and significance. O. Reiss and E. Boder.—p. 931.

*A study of two hundred forty breast-fed and artificially fed infants in the St. Louis area. II. Incidence of rashes and gastrointestinal disturbances in breast-fed infants and in infants fed on fresh milk formulas and on acidified and non acidified evaporated milk formulas. E. C. Robinson.—p. 1002.

Interchangeability of zinc crystalline and amorphous insulin. R. L. Jackson, J. D. Boyd and T. Smith. —p. 1050.

Vol. 59, June 1940

*Clinical studies of vitamin A in infants and children. C. D. May, K. D. Blackfan, J. F. McCreary and F. H. Allen.—p. 1167.

*Respiratory metabolism in infancy and in childhood. XXIII. Daily energy requirements of premature infants. H. H. Gordon, S. Z. Levine, W. C. Deamer and H. McNamara.—p. 1185.

*Cirrhosis of the liver in children. G. T. Harrell and A. McBryde.—p. 1301.

CONGENITAL CRANIAL OSTEOPOROSIS. There is a significant seasonal variation in the incidence of congenital cranial softening, which is inverse to the curve of sunshine. The incidence of this anomaly is lowest in infants of mothers who have had an abundant exposure to sun during pregnancy. A deficiency of vitamin D, rather than the calcium and phosphorus of the maternal diet, might be an etiologic factor in congenital cranial softening.

BREAST AND ARTIFICIALLY-FED INFANTS. Of 240 infants studied for 20 months, the breast-fed had the lowest incidence of diarrhea and rash. Babies fed whole milk were more liable to diarrhea than those fed evaporated milk. Infants fed irradiated milk had a somewhat higher incidence of rashes than those fed nonirradiated milk.

VITAMIN A. The level of vitamin A in the blood is a useful, direct clinical test for early diagnosis of deficiency of vitamin A. In infants and children, deficiency of vitamin A may be detected by a low level of vitamin A in the blood before other reliable clinical signs appear. Vitamin A absorption is affected by those conditions in which the absorption of fat is disturbed.

RESPIRATORY METABOLISM. Metabolism studies on 11 healthy premature male infants showed 120 calories per kg. to be adequate. This supplies energy requirements and a surplus for satisfactory weight gain.

CIRRHOSIS OF THE LIVER. Cirrhosis of the liver in children is more common than is usually suspected. Twenty children with cirrhosis were studied clinically and pathologically. Etiologic factors rarely are determined but are probably multiple. Diet deserves more consideration as a factor in the development of cirrhosis, especially when dietary deficiencies are combined with repeated infections.

American Journal of the Medical Sciences

Vol. 199, June 1940

*The role of water balance in the clinical manifestations of allergy. R. A. Kern.—p. 778.

*Hypertension, body build and obesity. S. C. Robinson. —p. 819.

The incidence of neuropathy in pellagra. The effect of cocarboxylase upon its neurologic signs. F. H. Lewy, T. D. Spies and C. D. Aring.—p. 840.

WATER BALANCE IN ALLERGY. The theory is suggested that changes in water balance may influence the occurrence of allergic phenomena. Water and salt retention favor the development of allergic reactions while dehydration and salt loss antagonize reactions. Increased intake of sodium, by tending to increase interstitial fluid

and edema, will also favor the development of allergic reactions. Increased intake of potassium, or decreased intake of sodium, by tending to increase intracellular fluid and decrease interstitial fluid and edema, will antagonize reactions.

HYPERTENSION, BODY BUILD AND OBESITY. Obesity is found to be intimately linked to the lateral or broad-build type; it occurs infrequently in linear or slender-build men and women. Of broad-chested men, 37% are heavyweight; whereas only 3% of slender men are heavyweight. Body build is correlated with hypertension. In any weight group the broad-chested individuals show the highest mean systolic and diastolic pressures, the greatest incidence of hypertension, and the lowest incidence of low blood pressures. Body build is the true genotype factor which, regardless of weight, determines in a great measure the predisposition of any individual to hypertension. The rôle of obesity in hypertension is found to be small.

American Journal of Public Health

Vol. 30, June 1940

*The health educator on the radio. J. Ries.—p. 641.
Administrative problems in securing proper bactericidal treatment of eating and drinking utensils. R. D. Bushong and A. H. Fletcher.—p. 652.

HEALTH EDUCATOR ON RADIO. Health broadcasts should be simple, natural and true to life. Time is valuable, so trite expressions must be omitted. Suggestions for the radio speaker are given.

American Miller

April 1940

*Vitamin B_1 as a key to increased flour consumption. P. J. Cardinal.

VITAMIN B_1 IN FLOUR. The public realizes that today's knowledge of vitamins is based on convincing scientific evidence of an indisputable character. With regard to vitamin B_1, specifically, the horticultural application of this vitamin has given dramatic evidence of its influence on growth. Reports of medical research in the lay press, showing the influence of thiamin in the treatment of the various types of polyneuritis and other thiamin-deficiency conditions, have made the public aware of its import in the diet. While the public continues to prefer white bread, there are indications that use of highly milled flour to which a normal content of vitamin B_1 has been restored will be the practical answer to new consumer demands. The total cost to the miller of raising the vitamin B_1 content of white flour to that of an equivalent amount of whole wheat should approximate 75 cents per barrel. These costs would tend to take a downward trend and would be inversely proportional to the extent of the milling process. Thus for the low-income or "no-income" group, a bread of not-too-highly refined white flour which could be adequately supplemented at a cost less than that for the finest quality patent flour, would seem to be the solution. The milling industry as a whole has taken to heart the barrage of scientific data directed its way by nutritionists, public health authorities and food controlling bodies. Through helping to maintain and protect the public health, the milling industry may also increase consumption of its output.

Archives of Pediatrics

Vol. 57, May 1940

*Postural correction in children. An analysis of forty-eight children. L. Cozen.—p. 287.
*Apple therapy. I. A. Manville.—p. 302.

Vol. 57, June 1940

*The care of the fetus and newborn. R. M. Tyson.—p. 337.

POSTURAL CORRECTION. Parents of 48 children given individualized exercise for 6 months to correct faulty posture were questioned about the results. The majority had improved. Those whose parents noted a marked improvement in posture also showed greater gains in weight, height and vital capacity than those whose parents noted little or no value of treatment.

APPLE THERAPY. Apples have long been used in folk medicine. Nutritionally, the carbohydrate content of the apple provides a source of energy and is antagonistic to acidosis. Some pathogenic bacteria and part of their toxins

may be inactivated through adsorption by the apple colloids. There must be other factors which account for the benefit derived from the apple diet.

CARE OF FETUS AND NEWBORN. The extent of mineral fixation during the last 3 months is 2½ times as great as during the first 6 months of pregnancy. Storage of iron during the last few months of pregnancy plays an interesting part in the mineral metabolism of prematures, for the premature infant quickly becomes anemic to a degree somewhat corresponding to the extent of the prematurity. Adequate prenatal care, including preparation for breast feeding, is important. Breast milk is the desired food. Artificial formula should be instituted cautiously.

British Medical Journal

June 8, 1940

*Food in relation to health in Great Britain: the historical background. J. C. Drummond.—p. 941.

FOOD AND HEALTH IN BRITAIN. A workingman's diet in the 18th century consisted of potato, milk and butter and very little meat. Wheaten flour was prepared by grinding the grain in a stone mill. The English have increased their consumption of fruit by 88%; vegetables, 64%; and milk, 50% since 1913. If a basic intake of essential protective foods for a population is ensured, it matters little what else is eaten.

Bulletin of the Johns Hopkins Hospital

Vol. 66, June 1940

*Factors influencing plasma prothrombin in the newborn infant. III. A study of the vitamin K activity of various naphthohydroquinone derivatives. L. H. Hellman, W. T. Moore and L. B. Shettles.—p. 379.

PLASMA PROTHROMBIN IN THE NEWBORN INFANT. In small, unit-equivalent doses, 2-methyl-1, 4-naphthoquinone, 2-methyl-1, 4-naphthohydroquinone dipropionate, and 2-methyl-3-phytyl-1, 4-naphthoquinone, dissolved in oil are capable of raising the plasma prothrombin of the newborn infant when given by mouth to the mother during labor. In similar doses, intravenous 2-methyl-1, 4-naphthohydroquinone-3-sodium sulfonate is shown to possess significant vitamin K activity.

Canadian Medical Association Journal

Vol. 42, May 1940

*Treatment of diabetes in children. G. Boyd.—p. 438.

Vol. 42, June 1940

*The effect of reducing diets on the eye. W. Thau.—p. 550.

DIABETES IN CHILDREN. Physiologic control of diabetes offers the individual a better chance of recovery and almost certain freedom from complications. High carbohydrate, restricted caloric diets satisfy, and permit maximum recovery of the pancreas.

REDUCING DIETS. Reducing diets entail vitamin deficiencies. Unsupervised or self-medication contributes to the aggravation of deficiency symptoms and often to permanent injury. The influence of each of the vitamins A, B, C and D on the eye is outlined. Patients should be taught the importance of a well-balanced diet so that deficiencies may be avoided.

Journal of the American Dental Association

Vol. 27, May 1940

*Changes in the hydrogen-ion concentration on tooth surfaces and in carious lesions. R. M. Stephan.—p. 718.

*The role of diet in the control of dentinal caries. J. D. Boyd.—p. 750.

CARIOUS LESIONS. The old belief that the eating of candy is apt to increase decay of the teeth is substantiated. It is the local influence of the presence of sugar on the tooth surface rather than the systemic influence of its ingestion that may lead to active caries.

DIET IN DENTAL CARIES. A study of 250 children revealed that those under dietary control showed a preponderant tendency to develop sclerosis of exposed dentin in carious areas within a few weeks or months after the dietary regimen was established. A similar state was lacking in children not on controlled diets.

Residual caries tended to retrogress in children under dietary control and to progress in others. Improvement of the ordinary diet was attained through increase in amounts of milk and its products, eggs, vegetables and fruits, and cod liver oil. The child with active caries must be considered to have a disturbance of metabolism which can be corrected most effectively through enrichment of the diet.

Journal of the American Medical Association

Vol. 114, May 4, 1940

*The treatment of colic in infants. F. C. Neff.—p. 1745.
*The carotene and vitamin A content of market milks. A. C. Dornbush, W. H. Peterson and F. R. Olson.—p. 1748.
Juvenile nephritis and lead poisoning. Editorial.—p. 1753.

Vol. 114, May 11, 1940

*Hormones and vitamins in cosmetics. J. J. Eller and S. Wolfe.—p. 1865.

Vol. 114, May 18, 1940

Hormones and vitamins in cosmetics. J. J. Eller and S. Wolfe.—p. 2002.

Vol. 114, June 1, 1940

*Treatment of muscular dystrophies and allied conditions. S. Stone.—p. 2187.
*The role of vitamin B_1 in delirium tremens. H. E. Kiene, R. J. Streitwieser and H. Miller.—p. 2191.
*Conferences on therapy. Treatment of blood disorders. I. Iron therapy.—p. 2207.
Fat transport in the animal body. Editorial.—p. 2220.

Vol. 114, June 8, 1940

*Early mild infestation with the parasite trichinella spiralis. J. E. Andes, R. A. Greene and E. L. Breazeale.—p. 2271.
*Incidence and interpretation of diabetic-like dextrose tolerance curves in nervous and mental patients. G. W. Robinson and P. Shelton.—p. 2279.
*Conferences on therapy. Treatment of blood disorders. II. The use of iron and other metals.—p. 2301.

Vol. 114, June 15, 1940

Pectin-agar for diarrhea in infants and the newborn. P. J. Howard and C. A. Thompkins.—p. 2355.

Vol. 114, June 22, 1940

*The occular manifestations of ariboflavinosis. V. P. Sydenstriker, W. H. Sebrell, H. M. Cleskley and H. D. Kruse.—p. 2437.
*Effect of calcium and phosphorus on retention of lead by growing organism. L. G. Lederer and F. C. Bing.—p. 2457.

Vol. 114, June 29, 1940

*Treatment of nephrotic edema. A. Goudsmit and M. W. Binger.—p. 2515.
Desoxycorticosterone acetate therapy in Addison's disease. G. W. Thorn and W. M. Firor.—p. 2517.
*Conferences on therapy. Treatment of blood disorders. V. Microcytic anemia.—p. 2544.

TREATMENT OF COLIC. Colic is a term to express paroxysmal pain in the colon or abdomen. It occurs in thriving infants as well as in those who may not be gaining, in the breast-fed and the bottle-fed. Treatment consists of a quiet environment, medical sedation for a few days and an increase in the food intake when necessary.

CAROTENE AND VITAMIN A IN MILK. The carotene and vitamin A contents of milks marketed by 8 large distributors in the Madison and Milwaukee areas of Wisconsin were determined monthly for 18 months. All milks showed marked seasonal changes. Per quart the winter milks (Jan.–April) averaged: market milk 1088 U.S.P. units; Guernsey, 1241 U.S.P. units; and certified, 1334 U.S.P. units. The corresponding figures for summer (June–Oct.) were 1906, 2415 and 1995.

HORMONES AND VITAMINS IN COSMETICS. Vitamins A and D can be absorbed through the unbroken skin but it is questionable whether the small amount so absorbed from cosmetics would produce any systemic effects in human beings. Vitamins in soaps are of questionable value because of the small quantity in the soap solution and the brief interval in contact with the skin. There are startling similarities between various hormones themselves, and between hormones and vitamins, structurally and functionally.

MUSCULAR DYSTROPHIES. Definite improvement was obtained in 5 cases of muscular dystrophy treated with vitamin E (wheat germ oil). There was a gain in muscle strength; fatigue and muscle pain on slight exertion disappeared; muscle texture changed and dystrophic musculature was displaced by normally contracting muscle tissue. In 2 cases, increase in amount of regeneration of muscle tissue became apparent after the addition of vitamin E to the vitamin B complex.

VITAMIN B_1 IN DELIRIUM TREMENS. Alcohol is not the principal factor in the production of delirium tremens. A deficit of vitamin B_1 content in the brain parenchyma is chiefly responsible. It is questionable whether the intravenous vitamin B_1 or the balanced diet was the essential part of the treatment.

IRON THERAPY. About 30% of the body iron is present as reserves and is called on to restore a deficiency in the circulating hemoglobin. Iron deficiency anemias are much more common in females who lose about 20 mg. of iron with each menstrual period and about 375 mg. with each pregnancy. Infection reduces the efficacy of iron therapy. There is no complete agreement as to whether ferrous or ferric salts are superior. Iron therapy should be given by mouth. Adequate doses such as 500 mg. of iron a day to adults are likely to be associated with a reticulocyte response.

TRICHINELLA INFESTATION. All but one of 10 patients believed to have been infested with trichinella spiralis gave a history of eating pork 1 to 3 days before the onset. Symptoms were malaise, abdominal discomfort, fever, headache, and edema around the eyes.

DEXTROSE CURVES. An abnormality of dextrose tolerance is a common finding in nervous and mental patients. A high carbohydrate diet with adequate insulin to ensure combustion is a valuable aid.

METALS IN BLOOD DISORDERS. Copper plays an important rôle in hemoglobin formation in a variety of experimental animals. It facilitates the conversion of stored iron into hemoglobin. Cobalt under certain conditions can stimulate erythrocyte and hemoglobin formation. Ferrous iron seems to be more effective than ferric iron in the treatment of nutritional anemias of infancy.

ARIBOFLAVINOSIS. In 47 patients with ocular symptoms and signs, photophobia, dimness of vision and actual impairment of visual acuity were dramatically relieved by the administration of riboflavin.

LEAD RETENTION. In young rats the amount of lead stored in the body is diminished by the addition of calcium carbonate to the diet. The addition of phosphate had no significant effect. Lead was stored chiefly in the bones. The kidneys contained relatively high concentrations as compared with the liver. Calcium prevents the absorption of lead from the intestinal tract.

NEPHROTIC EDEMA. Treatment of the nephrotic type of edema consists of rest in bed, a salt-free, high-protein diet, restriction of fluids, oral administration of potassium nitrate and intravenous injection of solutions of acacia. This regimen was 90% successful in the severe cases.

MICROCYTIC ANEMIA. The vast majority of cases of microcytic anemia are due to chronic bleeding. Iron seems to be the most essential replacement when given in large doses, as 1 gm., 3 times daily of reduced iron, or like doses of iron and ammonium citrates or ferrous sulfate.

Journal of Biological Chemistry

Vol. 133, May 1940

*Metabolism of d-mannoheptulose. Excretion of the sugar after eating avocado. N. R. Blatherwick, W. Hardy and S. D. Sawyer.—p. 643.

*Radioactive phosphorus as an indicator of phospholipid metabolism. XI. The influence of methionine, cystine, and cysteine upon the phospholipid turnover in the liver. I. Perlman, N. Stillman and I. L. Chaikoff. —p. 651.

The constitution of vitamin K_2. S. B. Binkley, R. W. McKee, S. A. Thayer and E. A. Doisy.—p. 721.

Vol. 134, June 1940

*Studies in iron metabolism with the aid of its artificial radioactive isotope. The absorption, excretion, and distribution of iron in the rat on normal and iron-deficient diets. M. E. Austoni and D. M. Greenberg.—p. 27.

The response of lipid metabolism to alterations in nutritional state. I. The effects of fasting and chronic undernutrition upon the postabsorptive level of the blood lipids. C. Entenman, G. W. Changus, G. E. Gibbs and I. L. Chaikoff.—p. 59.

*Glycine and histidine feeding and creatine, creatinine, and inorganic phosphorus excretion in man. E. Hyde. p. 95.

*Application to urine of Bandier and Hald's method for determination of nicotinic acid. L. A. Rosenblum and N. Jolliffe.—p. 137.

*Identification of the rice factor. H. J. Almquist, E. L. R. Stokstad, E. Mecchi and P. D. V. Manning.—p. 213.
*Variations in the blood calcium and phosphorus with age of the dog. H. D. Anderson and C. A. Elvehjem.—p. 217.

METABOLISM OF D-MANNOHEPTULOSE. Mannoheptulose appears in the urine of normal persons after the avocado is eaten. The concentration of sugar was high enough to cause reduction of the ordinary sugar reagents, thus becoming another source of confusion in the diagnosis of diabetes mellitus. The peak of excretion usually occurred 2 to 4 hours after ingestion.

PHOSPHOLIPID METABOLISM. In rats, single administrations of methionine, cystine, and cysteine stimulated the rate of phospholipid turnover in the liver. Increased phospholipid activity was observed 6 to 8 hours after single feedings of these amino acids.

IRON METABOLISM. A single dose of iron required 12 hours to pass from the stomach and small intestine of a normal rat. Passage was significantly slower in anemic rats which eliminated less of the administered iron in both urine and feces. The specific accumulation of the absorbed iron per gram of tissue was greatest in the bone marrow, blood, spleen, liver, and heart. The total accumulation was greatest in muscle and blood, particularly in anemic rats.

CREATINE-CREATININE EXCRETION. Daily administration of glycine equivalent to 1 gm. of creatine exerted no noticeable influence upon the urinary creatine, creatinine, or inorganic phosphorus of 2 healthy young women. Nor did the excretion of these components change sufficiently to support the hypothesis that exogenous glycine is changed to creatine or creatinine by normal women.

NICOTINIC ACID DETERMINATION. Urinary nicotinic acid was low in a pellagrin, disappearing altogether as the diet low in the B vitamins was continued. Administration of a diet high in the B vitamins, and supplementary administration of nicotinic acid, caused increases in the nicotinic acid excretion.

RICE FACTOR. Glycine is required for optimum growth of the chick. When adequate glycine is present in the diet, chondroitin has a growth-promoting effect on the chick. A combination of glycine and chondroitin can replace the "rice factor".

BLOOD CALCIUM AND PHOSPHORUS. The inorganic phosphorus of dog blood was found to decrease progressively throughout the growing period. A mild vitamin D deficiency was produced by feeding animals solely on mineralized milk. Cod liver oil produced a rise in inorganic phosphorus and a fall in the level of calcium.

Journal of Nutrition

Vol. 19, May 1940

*Composition of some common foods with respect to the carbohydrate content. T. M. Carpenter.—p. 415.
*The combustion of carbohydrates in man after ingestion of common foods. T. M. Carpenter.—p. 423.
Choline metabolism. IV. The relation of the age, weight and sex of young rats to the occurrence of hemorrhagic degeneration on a low choline diet. W. H. Griffith.—p. 437.
*Wheat as a dietary source of iron. A. H. Free and F. C. Bing.—p. 449.
*Effects of simple dietary alterations upon retention of positive and negative minerals by children. I. G. Macy, F. C. Hummel, H. A. Hunscher, M. L. Shepherd and H. J. Souders.—p. 461.
*Nicotinic acid potency of food materials and certain chemical compounds. H. A. Waisman, O. Mickelsen, J. M. McKibbin and C. A. Elvehjem.—p. 483.
*Protein anabolism in the organs and tissues of pregnant rats at different levels of protein consumption. L. J. Poo, W. Lew, D. D. Lee and T. Addis.—p. 505.

Vol. 19, June 1940

*Fasting catabolism and food utilization of calcium-deficient rats. M. Kleiber, M. D. D. Boelter and D. M. Greenberg.—p. 517.
*Adaptation of the growing rat to the ingestion of a constant concentration of fluorine in the diet. M. Lawrenz, H. H. Mitchell and W. A. Ruth.—p. 531.
*The prevention of nutritional muscular dystrophy in guinea pigs with vitamin E. N. Shimotori, G. A. Emerson and H. M. Evans.—p. 547.
*Cystine and methionine for growth and lactation. J. R. Haag and L. D. Wright.—p. 563.
*The effect of different levels of vitamin B_1 and iron on the retention of iron and the fat content of normal young rats. H. Oldham and F. W. Schlutz.—p. 569.
Carbohydrate values of fruits and vegetables. R. D. Williams, L. Wicks, H. R. Bierman and W. H. Olmsted.—p. 593.

On the difference between thiamin deficiency in the rat and deficiencies of the other members of the vitamin B complex. M. K. Dimick.—p. 605.

COMPOSITION OF FOODS. Twenty kinds of common foods, including rice, macaroni, white bread, vegetables, nuts, dates, and figs, were analyzed and results compared with analyses of similar foods by other investigators.

COMBUSTION OF CARBOHYDRATES. From measurements of total respiratory exchange and urinary nitrogen elimination of a man before and after ingestion of foods, each containing approximately 25 gm. of available carbohydrates, calculations were made of the carbohydrate combustion in the post-absorptive condition and in 12 successive 15-minute periods immediately after food ingestion. The amounts required of the several foods to give 25 gm. of available carbohydrates differed greatly. Boiled vegetables characterized as "sweet" caused greatest increases. Nuts, rice, macaroni, white potato, and bread caused the smallest. With cane sugar and dates, the increase in combustion was sudden and marked but quickly over. With nuts, increases in carbohydrate combustion were small but continuous.

WHEAT AS A SOURCE OF IRON. The iron content of 11 samples of American grown wheat varied from 2.9 to 4.9 mg. per 100 gm. An average of 81% of the total iron of wheat is ionogenic iron. Biologic assays with anemic rats show that the iron of wheat is fully as available as an equal amount of iron in the form of ferric chloride.

MINERAL RETENTIONS OF CHILDREN. Nine healthy children, 5 to 8 years of age, were subjects of metabolic study during pre-experimental and experimental periods ranging from 20 to 55 consecutive days. Chemical analyses demonstrate that a conservative substitution of such foods as apple, banana, and cereal in an otherwise constant, daily mixed diet cannot be effected without changing the proportions of other equally important dietary components. One hundred grams of banana was more effective than the same amount of apple or 30 gm. of cereal in stimulating the rate of growth as judged by increases in the individual's height and weight, and retentions.

NICOTINIC ACID ASSAYS. The biological assay of the nicotinic acid content of various food materials has been accomplished by the use of blacktongue dogs maintained on a modified Goldberger diet. The nicotinic acid content of meats and meat products ranges from 10 to 110 mg. per 100 gm. dry tissue. Liver extracts contained from 200 to 450 mg. nicotinic acid per 100 gm. Yeast ranged from 30 to 100 mg. per 100 gm. dry weight.

PROTEIN DISTRIBUTION IN PREGNANCY. The total quantity of protein formed during pregnancy is dependent on the protein intake. The concentration of protein in the organs and tissues of pregnant rats is lower than that in non-pregnant rats at all levels of protein consumption. At the end of pregnancy the gross distribution of protein in the body is not appreciably influenced by the amount of protein ingested. In pregnant rats the liver obtains more protein and the other organs less. The preponderance of liver protein increases with increase in protein consumption.

METABOLISM OF CALCIUM-DEFICIENT RATS. Rats were fed a diet containing only 10 mg. calcium per 100 gm. food. After 2 months, their mean body weight was approximately 30% below the body weight of litter mate controls fed *ad libitum* on the same diet, but with added calcium. A considerable decrease in appetite on the calcium-deficient diet is mainly responsible for the retarded growth. The calcium-deficient rats were shorter, with a smaller skull, and a finer skeleton than their pair-fed controls. The total efficiency of utilization of food energy was decreased by calcium deficiency, not only by a lowering of food intake and by a higher basal metabolism, but also by a lower partial efficiency.

ADAPTATION TO FLUORINE. Growing rats adapt themselves to the continuous ingestion of low levels of fluorine by excreting greater and greater proportions of the ingested fluorine in feces and urine. Increasing consumption of fluorine occasions greater increases in the concentrations of this element in the teeth than in the bones.

MUSCULAR DYSTROPHY IN GUINEA-PIGS. Wheat germ, wheat germ oil, and alpha tocopherol protect against the nutritional muscular dystrophy that can be produced in guinea-pigs. When the vitamin B complex is adequately supplied, vitamin E is the specific factor preventing nutritional muscular dystrophy.

CYSTINE AND METHIONINE. Cystine did not significantly improve the growth-promoting properties of peanut meal protein but appears to have caused a slight improvement in lactation-promoting properties. Methionine improved both growth- and lactation-promoting properties. Cystine and methionine serve primarily to make sulfur-deficient proteins nutritionally adequate.

THIAMIN INTAKE AND BODY COMPOSITION. Litter mate rats were given the same diets but varying amounts of iron and vitamin B_1 as thiamin hydrochloride. The levels of vitamin B_1 intake did not influence the retention of iron at the levels studied.

Journal of Pediatrics

Vol. 16, June 1940

The intravenous administration of small doses of casein hydrolysate to nephrotic children and its effect upon the nitrogen balance and plasma amino acid level. L. E. Farr.—p. 679.

*Synthesized, processed, and natural sources of vitamin C in the mineral metabolism of normal children. M. L. Shepherd, I. G. Macy, H. A. Hunscher and F. C. Hummel.—p. 704.

*A survey of the state of nutrition with respect to vitamin C in a southern pediatric clinic. A. S. Minot, K. Dodd, M. Keller and H. Frank.—p. 717.

*Environmental and personality problems in the treatment of diabetic children. H. F. Shirley and I. M. Greer.—p. 775.

Fluorine, mottled enamel, and dental caries. H. T. Dean. p. 782.

VITAMIN C IN MINERAL METABOLISM. In 6 children 5 to 8 years old, retention of nitrogen and minerals was improved by substitution of fresh orange juice for an orange-lemon mixture. Fresh orange juice may stimulate a greater gastric flow.

STATE OF VITAMIN C NUTRITION. Approximately 50% of children without significant diseases are in an unsatisfactory state of nutrition with respect to vitamin C. There is considerable seasonal variation.

PROBLEMS OF DIABETIC CHILDREN. A study of 155 diabetic children shows that treatment is often complicated by unsound economic conditions, unwholesome home environments, faulty parental attitudes, and poor cooperation and handicapping reactions on the part of the child.

Hygeia

Vol. 18, May 1940

Noise and nerves. R. Zeligs.—p. 392.

*Deadly disease number 4. Inflammation of the kidney. M. H. Barker.—p. 413.

*Noodles, macaroni, spaghetti and similar products.—p. 441.

*Mushrooms for flavor. H. M. Fyler.—p. 444.

Vol. 18, June 1940

Hormones. L. M. Boyer.—p. 532.

*Iodized salt.—p. 537.

Protein is the "stuff of life."—p. 538.

*Cold facts about ice cream. H. M. Fyler.—p. 540.

*Vitamin A in milk.—p. 544.

INFLAMMATION OF KIDNEYS. Nephritis was fourth in the list of causes of death in 1937. A diagram shows how the normal kidney works and how the inflamed kidney in nephritis cannot perform its task of excretion.

NOODLES, MACARONI, SPAGHETTI. "Milk macaroni" should be made with milk as the sole liquid ingredient. Egg noodles must include eggs as an ingredient, according to the federal standards. Brands of macaroni, egg noddles and similar products accepted by the Council on Foods of the American Medical Association are listed.

MUSHROOMS. "U. S. No. 1" mushrooms must be of the same type and color and not less than 1 inch in diameter. Color, symmetry and uniformity of size are important in ascertaining quality. Analysis shows mushrooms to be 92% water, 1% fat, 2% protein and 3% carbohydrate. They contain iron and copper and some vitamin B_1.

"Tempting, Low Cost Meals for 2 or 4 or 6" is a brand new cookbook containing more than 65 tested recipes, many attractive food photographs, helpful explanatory notes and menu ideas, which will prove valuable to any woman who is faced with the problem of food preparation.

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VITAMIN A MILK. A quart of winter milk provides a little more than 1000 units of vitamin A; a quart of summer milk, about 1900 units. Approximately one-fourth to one-half of the vitamin A requirement is met by a quart of milk.

Lancet

Vol. 238, June 15, 1940

*Nutritional deficiency of vitamin K in man. H. Scarborough.—p. 1080.

DEFICIENCY OF VITAMIN K IN MAN. Whether a spontaneous deficiency of vitamin K may arise in man in the absence of jaundice and as a result of a dietary deficiency of vitamin K, appears to depend on the method used for determining the prothrombin time.

Public Health Reports

Vol. 55, May 10, 1940

Existence and use of hospital facilities among the several states in relation to wealth as expressed by per capita income. E. H. Pennell, J. W. Mountin and K. Pearson.—p. 822.

Vol. 55, May 17, 1940

*Duration of illness from specific diseases among 9,000 families, based on nation-wide periodic canvasses, 1928-31. S. D. Collins.—p. 861.

Vol. 55, June 7, 1940

*Leprosy: Vitamin B_1 deficiency and rat leprosy. L. F. Badger, E. Masunaga and D. Wolf.—p. 1027.

Vol. 55, June 14, 1940

Studies on trichinosis. XIV. A survey of municipal garbage disposal methods as related to the spread of trichinosis. W. H. Wright.—p. 1069.

DURATION OF ILLNESS. Data on the frequency and duration of illness during a 12-month period between 1928–31 were obtained for 8758 white families in 130 localities in 18 states. The mean duration for illness from all causes was 4.3 days in bed per total case, and 8.5 days in bed per bed case.

VITAMIN B_1 AND RAT LEPROSY. The incubation period of rat leprosy in rats maintained on a vitamin B_1-free diet is definitely shorter than in rats maintained on a normal control diet. Evidence suggests that the shortened incubation period is due to an interference with the cellular defense mechanism rather than specifically to the vitamin deficiency. Rats maintained on a vitamin B_1-deficient diet are more susceptible to rat leprosy than normal rats.

Science

Vol. 91, May 3, 1940

Vitamin L and filtrate factor. W. Nakahara, F. Inukai and S. Ugami.—p. 431.

Vol. 91, June 7, 1940

*Nutrition as a factor in the development of constitutional barriers to involvement of the nervous system by certain viruses. A. B. Sabin and C. E. Duffy.—p. 552.

Vol. 91, June 21, 1940

Relative overgrowth of the central nervous system in vitamin A deficiency in young rats. S. B. Wolbach and O. A. Bessey.—p. 600.

Vol. 91, June 28, 1940

Coenzyme I and riboflavin content of livers of rats fed butter yellow. C. J. Kensler, K. Suguira and C. P. Rhoads.—p. 623.

CONSTITUTIONAL BARRIERS. The presence or absence of certain factors, either in the maternal diet during the nursing period or in the diet of actively growing young mice, can promote, retard or inhibit the development of at least one type of constitutional barrier to involvement of the nervous system by a neurotropic virus.

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WE INSIST ON THESE QUALITIES

2. Fine-grained meat that is firm in texture, and *well-marbled with fat.* Meat that has the sheen and firmness of vigorous animal tissue. Where these physical qualites show up, the hidden nutritional values are high. These are requirements of an Armour beef roast.

WE BRAND OUR BEEF . . . UNCLE SAM INSPECTS IT

3. Government Inspectors check over all carcasses in the Armour coolers...their stamp on a cut of beef is your guide to wholesomeness. We brand our beef for quality. And no beef that is not above medium grade gets the Armour Brands...Star, Banquet, Quality.

HIGH NUTRITIONAL VALUE— SCIENTIFICALLY PROVED

4. Fine beef like Armour's Branded Beef is a wholesome, appetizing source of *complete* proteins . . . important minerals—Phosphorus, Iron and Copper . . . calories . . . Vitamin A and the Vitamin B Complex, including thiamin, riboflavin, nicotinic acid. Many an institution with an eye to constant quality makes the Armour brand its buying guide to better beef flavor and tenderness.

ARMOUR AND COMPANY

UNION STOCK YARDS • CHICAGO, ILLINOIS

(In writing to advertisers, please mention the journal—it helps.)

INSTITUTION MANAGEMENT

American Restaurant Magazine

Vol. 24, April 1940

*New horizons in restaurant lighting. W. M. Potter. —p. 30.
*Restaurant operating costs. Horwath & Horwath. —p. 35.
*Problems that confront the restaurant industry. L. Boomer.—p. 36.
*Putting the spotlight on poultry cost control. G. L. Wenzei and S. Mallick.—p. 39.
*Soda fountains win new popularity in restaurant trade. T. F. Marshall.—p. 42.
*Refrigeration—modern answer to old questions. H. C. Siekman.—p. 46.
How portion control of garnishes aids eye appeal.—p. 48.

RESTAURANT LIGHTING. Good lighting is important in assuring customer satisfaction and profitable operation; 50-foot candle-power is desirable at merchandising points. Indirect and semi-indirect lights produce a bright and airy atmosphere. White filament, daylight or fluorescent lights are used successfully. White filament with daylight makes food appear more attractive. Wall coloring influences lighting. Detailed description with illustrations of Mazda fluorescent lamp is included.

OPERATING COSTS. Analysis of restaurant profit and loss statements. Illustrates means of accounting for employees' meals. Gives factors of food costs, operating costs, and payroll that influence profit.

PROBLEMS IN RESTAURANTS. Discusses restaurant operating for profit. Customer appeal primary factor. Employment of dietitians for menu making, selective menus, and to ensure higher food standards is becoming increasingly popular. Menu making requires knowledge of where people eat and what public wants, consideration of costs, and a thorough understanding of modern merchandising and advertising.

COST CONTROL POULTRY. Discusses poultry purchasing and portion costs. Chart illustrates quality on market. Government Grade A and Packers Grade A specifications presented. Includes weight specifications per bird and per dozen birds for broilers, fryers, roasters, fowl and turkeys. Portion costs for broilers, fryers, and roasting chicken are included in charts.

SODA FOUNTAIN POPULAR. Restaurants are finding fountain services profitable, especially during hot months. Serving problems are facilitated and comfort provided through modern furnishings. Cleanliness and attractiveness are important features today. Government survey shows greatest profit in syrup drinks, 32.6%; greatest food profit in sandwiches, 4.5%; hot plates sold at a loss.

REFRIGERATION. Primary purposes of refrigeration are food preservation and service of cold foods. Water content of foods determines temperature for storage. Chart presents moisture content of various cuts of beef, veal, pork, and mutton. Menu influences type and amount of refrigeration. Efficient refrigeration needed for greater profits in warm weather. Interior construction of unit particularly important.

Consumers' Guide

Vol. 6, April 1940

*Whey goes to the South Pole.—p. 10.
For your medicine cabinet.—p. 13.
*Your food supplies and costs.—p. 15.

WHEY USES. Uses for whey are among recent developments of U. S. Department of Agriculture. Whey candy, cheese, soup, potato chips and soap were taken to South Pole. These foods preserve valuable milk nutrients formerly wasted or fed to animals.

FOOD COSTS AND SUPPLIES. Two charts show variations in food costs for February 1929, 1933, 1939, and 1940, and illustrate the variation in retail food prices for December 1939, January 1940, and February 1940, showing an increase of 1.3% in February. Supplies of citrus fruits will be low. Supplies of other fruits, meats, poultry, and eggs will be larger than last year.

Food Industries

Vol. 12, May 1940

*Talk of the industry.—p. 31.
How to prevent browning of peaches in the freezing industry—part I. J. G. Woodroof.—p. 35.

Dessert Suggestions

FOR TIRED APPETITES

PLANNED FOR VARIETY... DESIGNED FOR ECONOMY

← **JELL-O PUDDINGS.** Ailing appetites respond quickly at the sight of these nourishing Jell-O Puddings. So delicious—they take top score in taste tests! Yet so easy to prepare that anyone can make puddings in 5 to 7 minutes.

3 Delicious Flavors

Real, rich Chocolate and Butterscotch. Also Imitation Vanilla (synthetic, for more lasting flavor). For variety serve all three! Their cost is low . . . average about 2¢ per portion. For pies, use these and Jell-O Lemon Pie Filling.

JELL-O is easy to digest and patients appreciate that extra-rich flavor that only Jell-O gives. Six delicious flavors offer plenty of variety.

Jell-O is easy to prepare. For tempting variations, mold in sliced canned, fresh or frozen fruits. Remember, there is only one Jell-O. →

PURE INGREDIENTS

Only the finest ingredients are used in making Jell-O and Jell-O Puddings. We guarantee these products will meet the highest food standards. Both are sold by your jobber. He'll be glad to supply you.

NOTE: FREE RECIPES

If you are not already receiving GF recipes specially designed for hospital service—address General Foods, Institution Dept. A-9, Battle Creek, Michigan.

JELL-O & JELL-O PUDDINGS

PRODUCTS OF GENERAL FOODS

*What to know about food colors. W. H. Kretlow.—p. 38.
*Sixteen things that can go wrong with air conditioning—part II. C. I. Elliot.—p. 40.
*Utilization of skim milk in a new potato product. B. H. Webb.—p. 48.
*How foods are frozen in the Northwest—part II. F. W. Knowles.—p. 50.
Pea canning and freezing.—p. 53.
Complete product protection tested and approved. G. E. O'Brien.—p. 54.
Recipe creates new market for old product. I. C. Miller.—p. 57.
New packages and products.—p. 62.
*Trucks replace freight cars in shipment of perishable product.—p. 64.
*Staining of lemons due to oxidation.—p. 92.
*Preserving vegetables and fruits.—p. 92.
*Russia would make apple jelly.—p. 94.
*Milk that can be whipped.—p. 94.
*Measuring ice cream quality.—p. 94.
*Ice cream texture.—p. 95.
*Vitamin A in frosted peas.—p. 96.
*Thiamin stability during meat processing.—p. 96.
*Mushroom poisoning.—p. 99.
*Formulas for foods.—p. 100.

INDUSTRY NEWS. Dr. Donald Laird's tests in flavor control and preference according to taste, sex, and age are described.

FOOD COLOR. Information about types of colors, mixing, solubility at different temperatures, reactivity with solvents and container materials, and uniformity of coloring strength.

AIR-CONDITIONING. Second in a series of articles on troubles which may be encountered in food plant installations deals with bacterial contamination, carbon contamination, tampering with controls, incorrectly installed pump, air distribution, misunderstanding of needs, and obstruction of the air movement.

SKIM MILK UTILIZATION. The Division of Dairy Research Laboratories, U. S. Department of Agriculture, reports a process which will promote the use of the byproduct skim milk, add a new outlet for potatoes and provide a new product with nutritional and flavor appeal for bakers, and biscuit and specialty manufacturers.

FROZEN FOODS. Describes the operations of the great food freezing industry of the Northwest. Presents practical operating information, data and drawings on the methods and equipment used, in the form of case histories.

TRANSPORTATION OF FISH. How automotive equipment allows inland cities to receive fresh salt-water and fresh-water fish speedily and at less cost than by railroad express. Description of truck construction.

LEMON STAINING. Waxing prevents the staining, pitting and consequent spoilage of this fruit, which cannot be accomplished by temperature control.

PRESERVING. A recent method patented in Canada for preserving fruits and vegetables by freezing is to surround the product with alternate wet and dry layers of sawdust and freeze the outer layer.

APPLE JELLY. A discovery has been made in Russia that any apple product cannery can make apple jelly from their waste at the rate of 13 tons of apple jelly per thousand tons of apples.

WHIPPED MILK. Powdered milk washed in lactic or formic acid, carefully dried and treated with aqueous ammonia can be whipped to a froth.

ICE CREAM QUALITY. Tests indicate a general preference for ice cream weighing 4½ to 5½ lbs. per gallon, with an overrun of 66 to 102 per cent, and show that quality will include factors of sanitation and taste, which are not necessarily related.

ICE CREAM TEXTURE. Serum solids are more effective than fat in decreasing the size of ice crystals; however, when judged by taste, fat is more important, as the lubricating effect may mask the larger crystals.

FROSTED PEAS. It has been found that little or no carotene is lost in peas during preparation and freezing.

THIAMIN STABILITY. Although the antineuritic factor is fairly well preserved in the careful processing of meat, it is doubtful if procedures can ever be developed which will prevent all loss and still preserve the product.

It's RICH IN IRON..

The daily iron requirement of an infant of six to ten months is *5 to 10* mg. of total iron.

An average serving of Gerber's Cereal Food (½ oz.) with milk supplies over *4* mg. of total iron.

Other sources from foods eaten by the average child and in amounts usually eaten—

Egg yolk, ½ yolk	0.7 mg.
Beets, ½ can	1.1 mg.
Liver Soup, ½ can	1.5 mg.
Apricot & Apple Sauce, ½ can	1.9 mg.
Prunes, ½ can	3.4 mg.
Milk, 24 oz.	1.3 mg.

..palatable, too!

Babies like the pleasant taste and smooth, palatable consistency of Gerber's—a feature that has won the enthusiastic approval of both doctors and mothers.

One of Gerber's Baby Foods

Cereal Food | Strained Foods | Junior Foods

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Gentlemen:
Kindly send me a sample of Gerber's Cereal Food together with a professional reference card.

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MUSHROOMS. A poisonous mushroom which closely resembles the edible variety may be differentiated by simple tests with common, inexpensive reagents.

FOOD FORMULAS. Formulas are given for John Bull Sauce, Doughnut Icing Glacé, Liver Loaf, Wine Cake and Canned Cherry Cocktail for large quantity food producers.

Hospitals

Vol. 14, May 1940

*Food problems in pleasing the patient. K. Maris.—p. 39.

FOOD PROBLEMS. A major problem of a hospital dietary department is to learn and practice the art of having well-fed and well-satisfied patients. Selective, well-planned menus, served attractively, and frequent visits accomplish wonders in helping the patient to make necessary hospital adjustments.

Hospital Management

Vol. 49, April 1940

*Let's have color. F. King.—p. 60.
*Veal for variety. I. S. Willson.—p. 64.

Vol. 49, May 1940

*Food service stressed in Pennsylvania state hospitals.—p. 45.

LET'S HAVE COLOR. Dining rooms and living quarters for hospital personnel are usually lacking in color and gaiety. Detailed explanation of how Jewish Hospital, St. Louis, Missouri, accomplished a complete transformation from drabness to cheerfulness at moderate cost.

VEAL FOR VARIETY. One in a series of articles on meats discusses modifications of meat cookery methods necessary in cooking veal. Softening connective tissue, adding fat, and using a constant and moderate temperature for roasts will give desired results. Includes description of how veal cuts may be used to best advantage, with recipes.

FOOD SERVICE. The organization of the thorough and comprehensive program for feeding patients in Pennsylvania's huge tuberculosis sanatorium is explained with a detailed description of the food service unit.

Hotel Management

Vol. 37, May 1940

*How to sell hot foods hot.—p. 21.
*Quiz for the pillow buyers.—p. 24.
*500 ways to cut food costs. J. B. O'Keefe.—p. 26.
*How to know your laundry.—p. 28.
Louis P. DeGouy's good food hints.—p. 38.
*Dictionary of pillow buying terms.—p. 58.
*What's new.—Opp. p. 80.

HOT FOODS HOT. Description of a portable cart for the serving of one or more courses by the waiter or waitress in the dining room. Capacity and special features are detailed.

PILLOWS. Discussion of kind and grade of feathers, buoyancy, softness in individual preference, cleaning, weight, size, durability and "bargain" buying, based on intensive research on the selection, purchase and care of pillows.

CUTTING FOOD COSTS. The fourth in a series of articles on economical practices in dealing with food costs explains how to avoid intentional and unintentional leaks in the payment of invoices.

LAUNDRY. This article gives time-saving ideas for the efficient operation of the laundry.

PILLOW BUYING TERMS. With the recommendation of the use of standard terms, the Pennsylvania Department of Labor, Division of Bedding and Upholstery, suggests definitions for labeling.

EQUIPMENT. It is possible to learn about new products through the offer of *Hotel Management* to send free samples, catalogs, merchandising aids, and literature from 48 companies.

Journal of Home Economics

Vol. 32, May 1940

Education for home and family life in the light of social trends. E. deS. Brunner.—p. 285.
Recollections and impressions of the beginnings of the department of home economics at the University of Illinois. I. Bevier.—p. 291.
Problems of the home management house—a symposium.—p. 301.
The nomenclature of the vitamins. G. Adams.—p. 314.
*Storage facilities for personal belongings in the home management house. M. Wilson and R. Morrison.—p. 321.

The Newer Concepts of Meat in Nutrition

The Important Role of

Meat in the Dietary

RECENT ADVANCES in the science of nutrition substantiate the desirability of the daily ingestion of meat, which from time immemorial has been one of the principal components of the human dietary.

Containing all the known essential amino acids, the protein of meat not only satisfies growth requirements, but is readily utilized in repairing the constantly recurring wear and tear of tissue. Meat, as a daily component of the diet, amply bears a high share of the vitamin burden. Thiamin (B_1), riboflavin (G), and nicotinic acid (the pellagra-preventive factor)—the most essential vitamins of the B complex—are supplied in nutritionally important amounts. Hence meat contributes a high percentage of the daily requirements for these accessory food factors in which many modern-day dietaries are likely to be deficient. Meat also provides minerals associated with vital body processes, notably phosphorus and iron, both of which must be supplied continuously to the organism, the one for bone, the other for hemoglobin formation.

With the better understanding of meat and its contribution to nutritional requirements has come the realization that meat with its rich protein content must be regarded as an important daily dietary factor not only in health but also for the organism burdened with febrile, wasting and many other chronic affections such as tuberculosis, hypertension, arteriosclerosis, arthritis, hepatic derangements, nephrosis and nephritis.

Chanutin, Alfred, and Ludewig, Stephan: Experimental Renal Insufficiency Produced by Partial Nephrectomy, Arch. Int. Med. *64*:747 (Oct.) 1939.

Editorial: Cellular Respiration, J. A. M. A. *113*:417 (July 29) 1939.

Goudsmit, Arnoldus, Jr., and Binger, M. W.: Treatment of Nephrotic Edema, J. A. M. A. *114*:2515 (June 29) 1940.

Stengel, A., Jr., and Ravdin, I. S.: The Maintenance of Nutrition in Surgical Patients, with a Description of the Orojejunal Method of Feeding, Surgery *6*:511 (Oct.) 1939.

Tuohy, E. L.: A Proper and Adequate Protein Diet for Elderly People, Minnesota Med. *23*:313 (May) 1940.

Whipple, G. H.: Production, Utilization, and Significance of Blood Proteins (Annual Lecture of the Minnesota Pathological Society), Journal-Lancet *59*:482 (Nov.) 1939.

The Seal of Acceptance denotes that the statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute

CHICAGO

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NEW BRAWNY LAD ELECTRIC RANGE

For Clean, Accurate Cooking

NEW, low-priced custom-top range for the diet kitchen. Select the top to fit your need.

HERE'S a new high in accurate cooking and labor-saving cleanliness for the modern diet kitchen. Edison-Hotpoint's sensational new *Brawny Lad* Electric Range gives your kitchen the spotless cleanliness and precise cooking accuracy so necessary to diet kitchens.

Brawny Lad is priced at about the level of a good domestic electric range but will do a man-sized cooking job in your diet kitchen. *Brawny Lad* will turn out the kind of cooking that is good to your patients and good to your operating budget. If yours is an "unusual" kitchen problem, let Edison-Hotpoint help solve it for you. Write today.

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COMMERCIAL ELECTRIC **EDISON**

DOCTOR ORDERED

NEW ROASTING AND BAKING OVEN

25% Faster, 35% More Efficient

EDISON-HOTPOINT'S new Electric Oven is 25% faster in reaching baking temperature and 35% more efficient than ever in holding heat. Saves on current, too, because heat is not wasted. Saves floor space. Saves ventilation because it burns no oxygen. It does not raise the temperature in your diet kitchen.

This remarkable new Edison-Hotpoint Electric Oven is clean, too. No fumes. No soot. No dust. No ashes. Safe because there is no combustion. Reduces fire hazards because there is no flame.

Write today for complete information.

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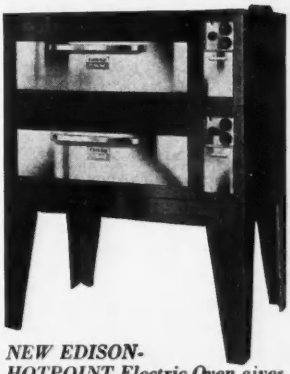
General Electric Company, Ltd., Toronto

KITCHEN EQUIPMENT HOUSES



NEW EDISON-HOTPOINT Electric Oven gives you automatic control over baking results. Let us prove it to you.

Hotpoint COOKING EQUIPMENT

STORAGE FACILITIES. Results of a study conducted at Oregon State College to determine the amount of storage space necessary for personal belongings in the home management house. Includes detailed description of the necessary storage facilities which would be applicable to many other situations.

Modern Hospital

Vol. 54, May 1940

*Treating vegetables right. H. Krass.—p. 102.
*What about summer desserts.—p. 104.
When cleaning kitchen ranges.—p. 106.
Food cost tables—dairy products.—p. 106.
June menus for the small hospital.—p. 108.

Vol. 54, June 1940

*Planning the tea room. M. R. Curfman.—p. 96.
*Helping the young diabetics. E. F. Wells, M. Whittlesey, E. Ewertz.—p. 98.
Food cost tables—staples, flour (all purpose). G. S. Saunders.—p. 100.

VEGETABLES. If simple rules of good cookery for different classes of vegetables were followed, the value of vegetables in the diet and their popularity would be increased. Sixteen points covering all phases of vegetable cookery are listed, as well as popular methods of preparation.

SUMMER DESSERTS. With the approach of warm weather, hospital dietitians feature popular desserts of fruits, ice creams, and ices. Originality and variety in dessert service are easy to accomplish according to suggestions offered.

PLANNING THE TEA ROOM. St. Luke's Hospital takes care of meals, or miscellaneous purchases that visitors wish to make, by having a hospital shop which comprises a combination soda fountain, tea room and restaurant, gift shop, and circulating library. Here the attending staff can also obtain meals.

HELPING YOUNG DIABETICS. The Y. W. C. A. and Rhode Island Hospital, Providence, have organized a plan of weekly social and monthly educational programs to educate and promote self-confidence in young diabetics.

Nation's Schools

Vol. 25, May 1940

*Forming good food habits. I. Tracy.—p. 72.
*Free food for frail bodies. H. T. Butler.—p. 74.
*Food cost tables—staples, baking powder, baking soda, and cream of tartar. G. S. Saunders.—p. 76.
Lessons in meat cutting. N. Fredenburg.—p. 80.

GOOD FOOD HABITS. The Alfred Plant Junior High School, West Hartford, Connecticut, has succeeded in forming good food habits in children through cooperation of science and hygiene classes and wise instruction by the lunchroom manager.

FREE FOOD. Discusses means of adequately feeding crippled children at Percy Hughes School, Syracuse, New York. Free meals are provided by the school.

STAPLE COSTS. Three tables compare costs of various priced baking powder, baking soda, and cream of tartar, per pound, and per units as commonly used. Purchasing units for the three staples are included. Computations aid in menu pricing.

Personnel Journal

Vol. 18, April 1940

*Management's approach to job training. E. B. Mapel.—p. 352.
*Labor's approach to job training. P. L. Garman.—p. 358.
*Hopes and fears of a worker. P. McCarty.—p. 365.
*Civil service oral interviews. M. Mandell.—p. 373.
*Salary determination. J. W. Riegel.—p. 383.
*Trends in student personnel work. S. M. Sturtevant, R. Strang and M. McKim.—p. 384.

Vol. 19, May 1940

*Unemployment compensation benefit decisions. B. Mitchell.—p. 2.
*Merit and seniority. D. K. Livingston.—p. 9.
Wage policies in war-time. J. H. Richardson.—p. 20.
Agriculture department trains personnel men. P. W. Melton.—p. 25.
*Personnel work for 1000 employees. E. N. Hay.—p. 30.
*Rating of supervisors by subordinates. I. J. Melsher and I. Weinstock.—p. 37.

JOB TRAINING. The efforts of industry to develop various methods of training employees in order to increase the efficiency of the working force with a minimum of expense. Discusses the training of assistants as foremen, selection of trainers, instruction of job trainers, installing the program, use of merit rating, responsibilities

MAY WE SUGGEST—

A VISIT TO THE KELLOGG BOOTH
(Number 10)

AT THE

23rd ANNUAL CONVENTION

OF THE

AMERICAN DIETETIC ASSOCIATION

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October 21 to 24
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This is the fifteenth year the Kellogg Company has been represented at this convention

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We want to have your name on our registration list

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FREE FOLDERS:

What Are Vitamins and Calories?

These two folders are a welcome aid in menu and diet planning. Send your request to:

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of job trainers, reports of activities, organization of instruction material, personnel functions of the job trainer, methods of checking results obtained, and summarizes the expected results.

LABOR'S JOB TRAINING. Describes activities and functions of one labor union in obtaining a planned training essential for knowledge of a job, with explanation of their guarantee of skilled worker supply, apprentice examination, and cooperation with management.

WORKER'S PROBLEMS. An employee's description of personnel and industrial relations at the Real Silk Hosiery Mills.

INTERVIEWS. The Civil Service Commission has developed a form for oral rating in order to pick the right man for an important executive position according to personality traits. Items for grading are as follows: appearance, manner and bearing, manner of expression, facility and effectiveness of expression, alertness, judgment, initiative and interest in work, originality and imagination, and the summary evaluation.

SALARY. The essentials of salary determination include: listing the duties and responsibilities of key jobs; evaluating the importance of unusual jobs by comparison with other similar key jobs; evaluating the importance of these key jobs; setting up standard salaries; setting up salary ranges (up to this point the object of study is the job, not the individual who holds it); and locating the individual within the salary range by means of performance rating (rating for salary is not the same thing as rating for promotion).

STUDENT PERSONNEL WORK. Trends in the growth and development of deans of women's offices.

UNEMPLOYMENT COMPENSATION. Since the reason for which an employee leaves a company, as stated on the separation report, may determine whether or not he is eligible for unemployment compensation benefits, it is important for the state to be informed of misconduct, grievance, and so forth.

PROMOTION. Report of a study of the principles of merit and seniority found operative in promotion, demotion and termination policies.

PERSONNEL DEPARTMENT. A discussion of the functions of a personnel department in an industry in relation to the following items: employment, transfers, promotions, separations, public relations, employee records, personnel policies, salary administration and hours of work, employee relations, economic security for worker, and health.

SUPERVISOR RATING. The advantages and disadvantages of organized rating of supervisors by subordinates, by means of an anonymous evaluation form.

Practical Home Economics

Vol. 18, May 1940

*35¢ luncheon menus planned to serve 50. M. Bradt.—p. 150.
*Meeting children's needs. J. Haneline.—p. 151.
*Large quantity recipes for May.—p. 154.

35¢ LUNCHEON MENUS. A series of 35¢ luncheon menus served to 50 students at the Work Shop conducted by Northwestern University last summer. The article includes problems of service and interesting points about the service.

MEETING CHILDREN'S NEEDS. An account of a fourth grade luncheon project conducted at Peabody Demonstration School. The purpose of the project was to remedy the children's lack of experience in food selection and to serve these children the right food in appropriate amounts for the same amount of money which previously they had been spending unwisely.

LARGE QUANTITY RECIPES. Recipes for Frozen Fruit Salad, Creamed Salmon and Noodles, and Escalloped Dried Beef and Sweet Potato.

Restaurant Management

Vol. 46, May 1940

*Johnson scores again! W. O. Voegele.—p. 14.
Salad bowl (sixth edition).—p. 19.
*Salad plates.—p. 20.
*Salads that sell well.—p. 25.
*Get on the salad wagon.—p. 27.
*Munch this crunchy lunch.—p. 29.
*Ninety three-cent dinner salads.—p. 30.
*How good is your system of refrigeration? A. N. Brent.—p. 33.
*Kartsen's go modern.—p. 34.
*500 ways to cut food costs (number six). J. B. O'Keefe.—p. 36.
Melons.—p. 37.
*25 popular fruit juice combinations.—p. 42.

BE SURE YOUR DISHES, GLASSES, SILVER ARE

CLEAR AS WELL AS CLEAN!

• No food you serve is half as appetizing as it could be, if it *looked* it! And no food can look its best when served with filmy dishes, fogged glassware, dull silver.

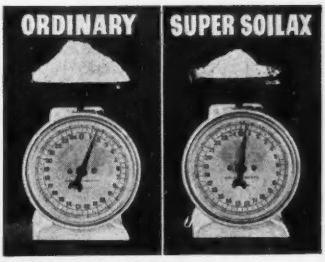
But how to get rid of that insidious lime film that seems to have an affinity to dishes, glasses, silver no matter how carefully they're washed? And how to do it without increase in your dishwashing costs? Simple! Use Super Soilax in your dishwashing water!

Super Soilax is no ordinary dishwashing compound. It prevents the precipitation of hard water lime salts, holds them in solution, insures free-rinsing and leaves dishes shining, glasses crystal-clear, silver sparkling. And Super Soilax does this at a lower cost *per month* than many compounds selling for far less *per pound!*

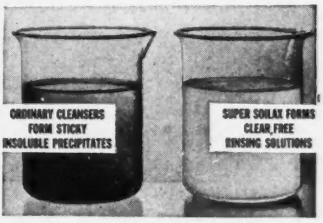
Get the facts. Call in the Super Soilax representative. Or write Economics Laboratory, Inc., St. Paul, Minn. No obligation.

SUPER SOILAX

FOR MECHANICAL DISHWASHING OF CHINA, GLASS, SILVER



IT'S CONCENTRATED, *that's why one pound of Super Soilax does more work than ordinary dishwashing compounds . . . and does it more thoroughly!*



A NEW CHEMICAL *in Super Soilax makes it form a more clear, more freely-rinsing solution . . . quicker! It saves you time, trouble and money in your dishwashing.*

FREE! *The special, patented waste-preventing Super Soilax Automatic Hydraulic Dispenser is loaned free to all Super Soilax users.*

FREE! *Super Soilax servicing by trained Super Soilax representatives is your assurance of a smoother-running, more trouble-free dishwashing operation.*

(In writing to advertisers, please mention the journal—it helps.)

JOHNSON'S. Includes up-to-date figures and highlights of Howard Johnson's background. The article explains in detail the franchise system under which 93 out of the 133 Howard Johnson restaurants operate and gives construction and decoration data for these restaurants.

SALAD PLATES. Recipes for 20 salads and illustrations of the salad plates.

SALADS THAT SELL WELL. Recipes and illustrations of 26 salads that sell well.

SALAD WAGON. At the Hotel Wellington, New York, customers make up their own salads from ingredients on the salad wagon. The salad girl is ready with suggestions, the most popular of which are included in the article.

CRUNCHY LUNCH. Christine McKeever of the Hotel Wellington has developed a unique contribution to good health and good flavor in eating, with her "Live Vegetable Garden," an arrangement of 16 different raw vegetables in a handsome pottery or glass bowl. The vegetables are cut into branches or strips and planted in crushed ice in a bowl.

DINNER SALADS. Recipes for ninety 3-cent dinner salads giving size of portion, green on which salad is to be served, dressing for salad, and garnish.

REFRIGERATION. A list of points to be watched in your refrigeration system in order to save operation cost and prevent food spoilage.

KARTSEN'S. Illustrates the modernization of Kartsen's 25-year-old cafeteria which now glistens with mirrors, glass and stainless metals, is air-conditioned and accoustically treated. The article includes clever merchandising schemes and points on decoration and service.

FOOD COSTS. The sixth of a series of articles on cutting food costs deals with the standard portion. Tells how to set the portion size for both table d'hote and a la carte portions, and how to make sure the standard portion is served once it has been decided upon. Case histories are given to show the importance of standardized portions.

FRUIT JUICE COMBINATIONS. A list of 25 popular fruit juice combinations, giving the number of portions per quart and the cost per portion. The combinations are planned on the basis of one quart; one-half cup portions are served in a 4 to 4½ ounce glass.

Fruit Juices and Alkalization

FRUIT JUICES do not act as an alkali in the stomach. Their acidity is due to organic acids which form salts on reaching the alkaline medium of the small intestine. When these salts of the organic acids are absorbed the acid radicals are metabolized, leaving the alkaline ions free. Thus fruit juices, while acid in reaction, are "alkaline ash" producing foods. There are exceptions such as prunes and cranberries, which are "acid ash" foods because they give rise to hippuric acid as one of their end products. However, even if the diet is of preponderantly "acid ash" nature, it does not follow that calcium need be liberated from the bones for purposes of neutralization. The body has several mechanisms to deal with the ordinary excesses of acid catabolites. Chief of these is the ability of the kidney to excrete a highly acid urine. This organ can also produce ammonia with which to neutralize acids before excretion. It is only when the compensating mechanisms of the body are overcome, by extreme or prolonged acid intake or by pathologic acid formation in the body, that it becomes necessary to draw on the calcium, sodium and potassium of the bones to replenish the alkali reserve of the blood.—*Queries and Minor Notes, J. A. M. A., 114: 1481, 1940.*

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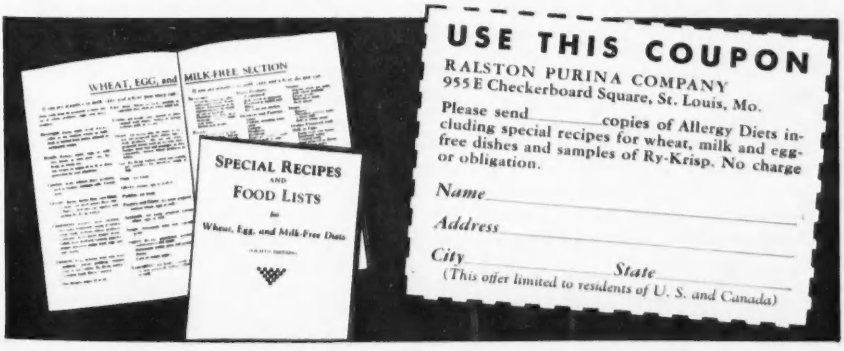

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NEWS NOTES

American Dietetic Association. Members and friends of the Association who perhaps have always acted on the assumption that the Association is in the favored group of non-profit institutions and exempt from certain taxes, may be interested to know that a definite ruling has been received from the government to this effect. The Association is exempt not only from income tax, but from all social security taxes. For those so disposed, it may be of interest that contributions to the Association are deductible like other gifts to charitable organizations.

American Home Economics Association at its 33rd annual meeting held in Cleveland June 24–28 with an attendance of over 2000, elected the following officers: president, Gladys Branegan, Montana State College; vice-presidents, Jessie W. Harris, Day Monroe, and Mildred Horton; recording secretary, Mrs. Dora S. Lewis; and treasurer, Mrs. Katharine M. Ansley. According to newspaper reports, the place of meeting for 1941 will be either Chicago or Boston.

The Eighth American Scientific Congress was held in Washington, D. C., May 10–18. The two cardinal purposes of this meeting were to advance scientific thought and achievement, and to assist in celebrating the fiftieth anniversary of the founding of the Pan-American Union. The program was formally opened by the President of the United States and the following day the Secretary of State and Mrs. Hull greeted the delegates at the official reception. Of particular interest to the two delegates from the American Dietetic Association, Grace Bulman, U. S. Veterans Bureau and Mrs. Eloyse Trescher, Dietary Department, Johns Hopkins Hospital, were the meetings on nutrition conducted by the Section on Public Health and Medicine of which Dr. Thomas Parran, Surgeon General, United States Public Health Service, was chairman. The papers on nutrition reflected the present state of progress as applied to problems which have arisen in the different countries. Prominent among these were the several phases of malnutrition which make up the complex condition hitherto designated as pellagra; dietary studies and practical methods for compensating deficiencies found both in adult diets and child feeding; methods designed to bring newly acquired knowledge to the populations affected; and the application in surveys of populations, of available methods for determining the prevalence of nutritional defects. Of special interest to dietitians was the following program concerning nutrition and related subjects:

Dr. E. V. McCollum, The Protein Element in Nutrition.

Dr. Soma Weiss, Peter Bent Brigham Hospital, Boston, Occidental Beriberi with Cardiovascular Manifestations: Its Relation to Thiamin Deficiency.

Dr. V. P. Sydenstricker, University of Georgia School of Medicine, Multiple Deficiency Factors in Pellagra.

Dr. Jorge Bejarano, professor of hygiene, Medical School of the National University of Colombia, Bogota, Diet and Nutrition in Colombia.

Dr. John B. Youmans, Vanderbilt University School of Medicine, Nutritional Edema and Dietary Deficiency.

Dr. Antonio Pena-Chavarria, San Jose, Costa Rica, Observations on Nutritional Diseases of Costa Rican Children.

Dr. Justo F. Gonzalez, Medical School of University of the Republic, Uruguay, Several Aspects of Nutrition in Uruguay.

Dr. Pedro Escudero, director, National Nutrition Institute, Argentina, General Conclusions of the Nutrition Activities in Argentina.

Dr. W. H. Sebrell, U. S. Public Health Service, Washington, Multiple Vitamin B Complex Deficiencies.

Dr. C. Torres-Umana, Medical School of National University of Colombia, Bogota, Avitaminosis C in Bogota Children.

Dr. Joseph H. Axtmayer, School of Tropical Medicine, San Juan, Puerto Rico, A Comparative Study of Three Distinct Diets in Common Use in Puerto Rico.

Dr. Juan Beltranena, Guatemala, Oral Signs of Secondary Anemia.

Dr. H. Trendley Dean, U. S. Public Health Service, Washington, Fluorine-Mottled Enamel Relationship to Dental Caries.

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Biennial Nursing Convention. A joint meeting of the National Organization for Public Health Nursing, the American Nurses Association, and the National League of Nursing Education was held at Convention Hall, Philadelphia, May 13–17, 1940. Over 10,000 nurses attended.

The American Dietetic Association's exhibit featured the outlines developed for teaching nutrition and dietetics to nurses and nutrition workers in community health agencies. Three wall charts and three mimeographed forms entitled: "Are You Earning Your Way to Health—What's Your Score?", "Suggested Qualifications for the Nutritionist in Health Agencies", and "Some Suggested Activities of the Nutritionist in Health Agencies" were prepared and emphasized the public health aspects and applications of nutrition. Information regarding the Association was disseminated through printed folders. Approximately 500 to 1000 people visited the booth daily.

The following members of the Philadelphia Dietetic Association assisted at the booth: Mary Carver, Vera Kirstell, Alice Knudson and Margaret Mason, Philadelphia General Hospital; Cathryn McAndrew and Sylvia Waide, Pennsylvania Hospital for Mental and Nervous Diseases; Mary Eckhardt, University Hospital; Alice Karslake and Sarah Goodman Goldberg, Temple University Hospital; Lillian Hack, St. Christopher's Hospital; Eleanor Bigelow, Visiting Nurse Society; Louise Kaylor, Pennsylvania State Department of Health; and Anna dePlanter Bowes, Philadelphia Child Health Society.

Conference of Food Service Directors. The sixth annual conference will be held at the Hotel Statler, Detroit, November 7–9, 1940. Mary M. Harrington, Harper Hospital, publicity chairman, states that the program is planned to interest food service directors in school lunchrooms, college dormitories, private school lunchrooms, industrial cafeterias and other institutions.

All food service directors have a united interest in production and service of good food, problems of personnel management, and in recent trends in nutrition, modern business methods, equipment and lay-out, and sanitation. The program this year is planned to include all of these interests. Detroit, as a hostess city, is particularly suitable for this conference because it offers an opportunity to visit an outstanding school lunchroom system and industrial cafeterias. A trip is also planned to Michigan State College, East Lansing, for inspection of the food service departments of the new men's and women's residence halls.

Constance Hart, Board of Education, Rochester, New York, is the general chairman of the conference and Winning Pendergast, Detroit School Lunchroom System, is local chairman.

New England Refresher Course. This program, offered annually by the Massachusetts Dietetic Association, and details of which may be found under the Current Comment section of this JOURNAL, included the following speakers:

S. Margaret Gillam, New York Hospital, Food Cost Control and Standardization of Recipes.

Dr. Helen S. Mitchell, Massachusetts State College, Vitamin Facts and Fads.

Marion Floyd, Massachusetts General Hospital, Planning Food Service Equipment.

Raymond Kinsman, Massachusetts General Hospital, Kitchen Equipment Maintenance.

Hortense Burleigh, Wheelock School, Party Meals.

Doris H. Tisdale, Standard Brands Inc., Food Photography and Editing.

Bertha Burke, Harvard School of Public Health, Prenatal Education.

Dr. Edward L. Tuohy, Harvard School of Public Health, Infant and Child Feeding.

Charlotte Raymond, Newton, Massachusetts, Nutrition Histories, Their Value and Evaluation.

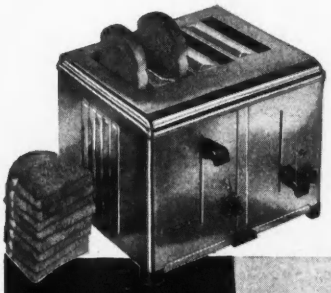
Dr. John D. Stewart, Harvard Medical School, Nutritional Care of Surgical Patients.

Dr. Louis Zetzel, Beth Israel Hospital, Meulengracht Diet and Gastric Ulcers.

Frances Stern, Boston Dispensary, The Food Clinic and Community Problems.

Helen Hooker, Boston Dispensary, Patient, Dietitian, and Social Worker.

Ann Thomson, Newton Visiting Nurses' Association, Patient, Nutrition Worker, and Nurse.



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Dr. Harold Chope, Newton, Massachusetts, The Nutritionist and the Public Health Program.

Alice Blood, Simmons College, Normal Nutrition.

Quindara Oliver Dodge, Simmons College, Menus for Profit and Satisfaction.

Elizabeth Kingsbury, New England Medical Center, Diet Therapy.

Dr. Walter B. Cannon, Harvard Medical School, Reminiscences of Early Observation on the Digestive Tract by Means of the Roentgen Ray.

Kathleen J. House, Wiggins Old Tavern, and Velma Eichorn, Hotel Statler, Boston, Production of Quality Foods.

Elizabeth Crandall, Providence Biltmore Hotel, Is it a New Job?

Jeanette A. Kelly, Lever Brothers, How to Prepare for an Interview.

Alice M. Fenno, Hotel Statler, Guest or Patient?

Betty Jane Zimmerman, Massachusetts General Hospital, Food Purchasing and Store Room Management.

Martin F. O'Connor, State Teachers College, How to Get Well Qualified Lunchroom Managers in Schools.

Frances L. Hoag, Philadelphia Dairy Council, Teaching Through Seeing.

Constance C. Hart, Board of Education, Rochester, New York, Quantity Recipes and Menu Pricing.

Raymond A. Fitzgerald, Massachusetts Department of Education, Legal Aspects of School Lunch Programs.

Beula B. Marble, Mr. Lincoln Did It.

First Annual Meeting of the Institute of Food Technologists was held at the Morrison Hotel, Chicago, June 16–19. Topics of special interest to dietitians concerned jelly making by a continuous method, how the chemical engineer looks at a food process, and subjects ranging from the mechanism of heat transfer, sanitary principles in dairy equipment design, and germicidal efficiency of washing solutions for glass containers, to moisture content of staple dietary foods, vitamin B_1 potency of malt and brewed beverages, and securing food for an army.

The "Effect of Processing on the Vitamin Content of Foods" was discussed in a symposium under the chairmanship of George C. Supplee of The Borden Company. Dr. C. A. Elvehjem, University of Wisconsin, led a symposium on vitamins, speaking on "The Nature of Vitamins with Particular Reference to the B Complex." Vitamins A, B_1, C, D and G were then discussed with respect to their stability under food processing conditions.

Other sessions concerned the packaging of foods; the technology of food preservation; methods of analysis and control of unit operations in food processing (covering edible fats and oils, meat and meat products, canning, cereal products, brewing, and baking and bakery products); and microbiology in food processes.

Catholic Hospital Association of the United States and Canada. The Silver Jubilee Convention under the patronage of His Excellency, The Most Reverend John Joseph Glennon, Archbishop of St. Louis, was held in the Municipal Auditorium, St. Louis, June 17–21. A sectional meeting on "Dietetics" was held June 20, with Sister M. Adolphus, Marymount College, Salina, Kansas, as presiding officer, and the following program: "The Extent of the Dietitian's Responsibility, Sister Romuald, director of nutrition, Good Samaritan Hospital, Cincinnati; "The Administrative Responsibilities of the Dietitian": (a) "Survey of the Duties of the Administrative Dietitian", Sister M. Margaret, St. Anthony's Hospital, Oklahoma City, and (b) "Food Cost Accounting and Control", Sister Mary Carola, St. Mary's Hospital, St. Louis; and "Standards of the American Dietetic Association", Mrs. Gladys H. Silkey, St. Louis University Hospitals.

The Eighth Annual Graduate Home Economics Conference was held June 14 under the auspices of the Home Economics Department and the Graduate School of Louisiana State University. The theme of the conference was "Home Economy as a Factor in Family Unity." Under the general subject "Family in the Home" the morning session with Hazel Baker as chairman included the following speakers and subjects: Mildred Horton, vice director of extension, state home demonstration agent of Texas, "Building Wholesome Family Life" and Anna M. Tracy, Florida State College for Women,

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"Family Food Supplies Related to Community Facilities."

At the afternoon session with Ellen LeNoir as chairman, the subject, "Family in the Community" was discussed as follows: Miss Tracy, "A Part Which Home Economics Can Play in Building Better Business Consumer Relationships"; and Miss Horton, "Good Family Life—The Basis of Community Building."

The Joint Annual Conference of the American Association of Medical Milk Commissions and the Certified Milk Producers of America was held June 10-11 at the Hotel Roosevelt, New York. Many of the discussions concerned the place of certified milk in a healthful diet. Speakers included Dr. Irving J. Wolman, The Children's Hospital, Philadelphia, "Meaning of Quality in Milk"; Dr. Frank Needham, Chicago Medical Society Milk Commission, "The Milk Supply of a Community and its Relation to Communicable Disease"; and Dr. Robert H. Harris, Massachusetts Institute of Technology, "The Rôle of Milk in Attaining Optimum Nutrition." "Nutritional Problems in the Diabetic Patient" and "The Rôle of Milk in the Treatment of Tuberculosis" were discussed by Dr. John J. Weber, Lutheran Hospital, Brooklyn, and Dr. Henry Reisman, Mary Immaculate Hospital, Jamaica, L. I., respectively. The concluding speaker on June 10 was Dr. Harry Mandelbaum, Jewish Hospital, Brooklyn, who discussed "Milk, an Essential Requisite in the Adult's Diet."

On June 11 the afternoon program included the following: Dr. J. H. Shrader, Wollaston, Massachusetts, "Milk: Whither Research?"; Dr. Carl Larson, Whiting Milk Company, Boston, "The Trend of Certified Milk"; Dr. Joseph Paulonis, Lutheran Hospital, "Feeding the Young Infant"; and Dr. Edward W. Zukauckas, New York Department of Health, "Feeding the Older Child."

New Tables on the Vitamin Content of Human and Animal Foods. *Nutrition Abstracts and Reviews* for April 1940 contains additional data incorporated in tables by Drs. M. A. Boas Fixsen and M. H. Roscoe which supplement those by the same authors and in the same publication in 1938. The present tables contain considerable additions to the vitamin C table. Pure synthetic vitamin B_1 hydrochloride now takes the place of the acid clay adsorbate as the international standard and the unit is correspondingly redefined as of the potency of 3 micrograms of the pure vitamin B hydrochloride. The authors have considered it premature to include tables of values for the nicotinic acid content of foods; they believe that as yet there is no convenient biological method with which these values can be checked. No statement is appended concerning the availability or price of reprints of the current work.

Food and Drug Administration, U. S. Department of Agriculture, announces that for a number of years they have studied the significance of mold mycelia in butter in relation to the quality of cream from which butter is manufactured. These studies, completed in the summer of 1939, showed conclusively that a high mold mycelia count in the finished butter never occurs unless some of the cream is to a material degree filthy, putrid, or decomposed. Butter made from such cream is considered to be adulterated within the meaning of the Food, Drug and Cosmetic Act. The Administration expects to continue legal actions against unfit cream and butter. In addition to other recognized methods it will use the Wildman mold mycelia count method (J. A. Off. Agric. Chem., 22: 76-77, 1939) to determine whether unfit cream has been used in manufacturing butter. There is evidence that careful manufacturers may, without serious difficulty, produce butter showing mold mycelia counts in the neighborhood of 20 per cent.

The Administration also states that standards of identity for canned fruit require that when the canner elects to use sirups made from a mixture of dextrose and sucrose the mixed sirups shall approximate the sweetness of the corresponding sucrose sirups designated in the standards as light, medium, heavy or extra heavy. This means that the total weight of the mixed sweetening ingredient in the sirup must be somewhat more than when sucrose alone is used, because dextrose is not so sweet as sucrose. For the convenience of canners, tabular calculations are available, translated into actual Brix ranges for two different dry mixtures of sucrose and dextrose, with the Brix ranges of all-sucrose sirups placed alongside for comparison.

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On June 19 it was announced that the standard of identity for canned tomatoes promulgated under the Federal Food, Drug, and Cosmetic Act, effective as of January 1, 1940, had been amended, to become effective September 17. It permits the use of calcium chloride as an optional ingredient in canned tomatoes, and specifies the label statement to be used when it is present. The amended identity standard was published in the Federal *Register* for June 19. Copies may be obtained from the Supt. of Documents, Government Printing Office, Washington, D. C., at 10 cents each.

The Food, Drug, and Cosmetic Act defines a food product as adulterated if it consists in whole or in part of a filthy, putrid, or decomposed substance. On July 27, 1938, it was announced in connection with tomato juice that pending consideration of a further lowering, tomato juice would be regarded as adulterated when mold filaments are present in more than 25 per cent of the fields. During the coming 1940 season, and pending consideration of further reductions after this season, actions under the Act will be instituted against tomato catsup, purée and paste if mold filaments are present in more than 40 per cent of the microscopic fields; and in tomato juice, if mold filaments are present in more than 15 per cent of the microscopic fields. Comminuted tomato products are often used in the fabrication of other food products as tomato soup, beans with pork, spaghetti sauce, etc. The use of comminuted tomato products with mold counts in excess of the above limits in the manufacture of other foods constitutes adulteration.

The Administration announced on June 28 that amendments to the canned cherry standards permit either the designation "red tart" or "red sour" to be used in naming the red sour variety of cherry, and change the method of counting pits and pit fragments. An amendment to the asparagus standard changes the requirements with respect to length of stalks or spears, peeled stalks or peeled spears, tips, and points, effective September 26.

The monthly statement of regulatory actions reported in June the seizure of numerous lots of foods, drugs, and devices which were found to be in violation of the Food, Drug, and Cosmetic Act. Decomposition in whole or in part accounted for the seizure of the following food products: fish roe, frozen whole eggs, shell eggs, and frozen mixed eggs. Certain tomato products were removed from the market because of the use of moldy tomatoes. As a result of insect infestation, dried prunes, weevil-infested canned peas, candy, raspberry preserves, tomato paste, and tomato catsup were seized. Seizures were also made of the following lots of food products because of filth and other forms of contamination: crab meat, shelled peanuts, peanut butter, shelled pecans, candy, and maple syrup containing lead. Violations of an economic nature brought the seizure of low-fat butter, short weight sandwich spread, short-weight canned chicken tamales, canned peas of substandard quality but not so labeled, canned tuna flakes (white meat) in which tuna of a different variety was substituted for white meat tuma, candied yams which consisted of pieces of mashed sweet potatoes containing little or no syrup; imitation lemon and so-called "pure vanilla" flavor containing a substance having little or no flavoring value which had been substituted for lemon and pure vanilla flavor.

Under the deceptive packaging provisions seizures were made of various lots of packaged items because their containers were so made, formed, or filled as to be misleading, such as candy, dates, tea, elbow macaroni, caraway seed, sour salt, whole cloves, and Chinese noodles.

The Federal *Register* of July 2 contained regulations establishing definitions and standards of identity for cream, whipping cream, evaporated milk, concentrated milk (plain condensed milk) and sweetened condensed milk. These will become effective September 30, 1940, and copies of the *Register* may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. at 10 cents each.

Change in Name and Policy of the Council on Foods, A. M. A. The chairman of the Council has suggested to the Board of Trustees that the Council hereafter be known as the Council on Foods and Nutrition. This change has been accelerated by two trends: First, the Federal Food and Drug Administration has assumed the function of fixing standards and defining foods, stipulating that the ingredients of processed foods must be declared on the label, which obviates much of the work in which the Council

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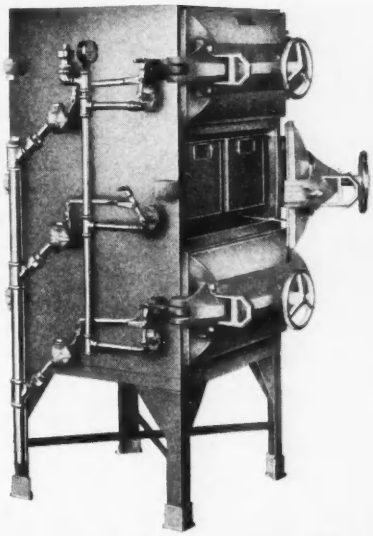

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originally pioneered. The Council does not propose to retire from this field but in order to avoid duplication of effort and possible conflict of authority, wishes to restrict its consideration of foods largely to the study of individual products intended for the feeding of infants, special foods for the sick, and foods which have been manipulated by the addition of vitamins, minerals or other dietary essentials. The second trend is seen in the epoch-making advances which are being made in the science of nutrition. According to the report as it appears on page 2560 of the *Journal* of the A. M. A., June 29, 1940, "Great discoveries are coming so rapidly that the public, and even the medical profession, is at times a bit bewildered." As a result the Council finds itself "exercising an important function, not exercised by any other competent organization—that of assembling information and expressing authoritative opinion in the field of nutrition."

Nomenclature of Vitamins. The Council on Pharmacy and Chemistry of the A. M. A. has voted to adopt the pharmacopeial term "thiamine hydrochloride" to replace the term suggested by the discoverer, *i.e.* "thiamin chloride." The terms "pyridoxine" and "pyridoxine hydrochloride" for the substances known as vitamin B_6 and vitamin B_6 hydrochloride, were accepted provided the nomenclature met with the approval of the American Society of Biological Chemists and the American Institute of Nutrition. Halibut liver oil-N.N.R. so designated must have added viosterol (activated ergosterol) sufficient to assure a potency of not less than 10,000 U.S.P. units of vitamin D per gram.

Collection of Gastronomy Presented to Library of Congress. A collection of books on gastronomy has been given to the Library by Dr. Arvill W. Bitting, food technologist of San Francisco, in memory of his wife, Katherine Golden Bitting, who died in 1937. The collection was assembled during their lifelong investigations into the chemistry, bacteriology and history of foods. The Library of Congress has agreed to establish the Katherine Golden Bitting Collection on Gastronomy as a separate unit among its collections where it may be readily available to present and future students in the field.

WPA Dietary Projects Continued by Means of New Grant. The *Welfare Bulletin* of the State of Illinois announces that approval has been received from Washington for the continuance of the WPA dietary project, now in operation in ten of the state welfare institutions. A total of $345,551 has been appropriated for the work during the year 1940. The money is used to pay the salaries of dietitians and workers. At present there are approximately 290 workers employed in the ten units of the project.

This plan has been of valuable assistance to the state institutions in the preparation and serving of special diets and menus which they were unable to handle with their usual help. Mrs. Gladys Frazier is state supervisor of the diet project and each unit has a dietitian in charge, with approximately 25 workers. The WPA dietitians are supervised by the institution dietitians employed by the state, with Mrs. Christine R. Pensinger, food and textile adviser of the Department of Public Welfare, as director.

Diet manuals on different feeding problems are being prepared on this project. Such manuals for the feeding of blind children and the feeding of deaf children have been completed and others will be completed soon. This project has helped the department to improve the food given to special types of patients, such as the tuberculous, working and infirm. No regularly employed personnel has been replaced by the WPA dietary projects.

A Family Life Conference, New York State College of Home Economics, Cornell University, Ithaca, May 21-24, was attended by home demonstration leaders, 4-H Club, farm bureau agents, county leaders, representatives of family life, study groups, and other family life leaders. "Values in Family Life" was the theme of the conference, held in the auditorium of Martha Van Rensselaer Hall. Since this annual gathering is planned as a work conference in preparation for the following year's extension program in the state, the membership of the conference is made up primarily of those responsible for carrying on the program.

The Conference of Health Officers and Public Health Nurses, held at the Grand Union Hotel, Saratoga Springs, included in its program a dis-

From Barn to Boudoir, *or the Rise of Elsie the Cow*

ELSIE, the Borden Cow, was toying with a hairbrush in her wonderful new boudoir at the *New York World's Fair.*

She was terribly excited about the room, but trying hard to look nonchalant.

Elmer, the Bull, cleared his throat and said, "Some place, eh? Even better than we had last year."

"Why shouldn't it be?" Elsie replied. "I was the hit of the Fair last year. I expect a couple of million more people will want to shake hoofs with me this summer. To think that I owe all this to my milk!"

"And to The Borden Company," Elmer grunted. "After all, Elsie, they really brought you here just to give visitors a fancy-dress version of how well you live back home."

"Also to show how the products made from my milk turn out so pure and wholesome," Elsie added. "How the young veterinarian who checks my health—the scientists in the lab—and all those other folks who account for Borden's 'Quality Control', see to it that Borden's Ice Cream and Evaporated Milk and Biolac and all other Borden products are just as good and pure as can be made."

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cussion on nutrition by Dr. Frank G. Boudreau, New York, under the subject "The Next Step in Public Health."

John Horsley Memorial Prize Awarded. Dr. Dupont Guerry, on the staff of the Manhattan Eye, Ear and Throat Hospital, New York, has been given the John Horsley Memorial Prize in medicine of $600 in recognition of his discovery of "the use of vitamin K in stopping excessive bleeding in newborn infants."

Arnold Shircliffe, manager of the Wrigley Restaurant, Chicago, was an instructor in the Summer School of Hotel Administration at Cornell University, July 15–20. Speaking of Mr. Shircliffe's collection of menus, the Department of Hotel Administration commented: "The collection is not only historically interesting, but since it includes a very complete exhibit of modern menus from nearly every principal city in the Union, it will have great practical value." Students of the course will engage in menu construction work of all kinds. In this they will be assisted by Mr. Shircliffe's large special list of breakfast, luncheon, dinner and feature American dishes.

Mabel Flanley Lectures. The Borden Company, New York, announced in June that Mabel Flanley would join the faculty of the American Council on Public Relations during the summer. As eastern director of Consumer Relations for The Borden Company and skilled in interpreting the rising tide of organized consumer interest, Miss Flanley has also proved proficient in interpreting business and industry to representative consumer groups. She headed the short course for executives and others interested in public relations given July 8–September 6 under the joint sponsorship of the Council and the University of Washington, Seattle; Reed College, Portland; Stanford University, Palo Alto; and the University of California at Los Angeles. Miss Flanley was the 1939–40 chairman of the New York group of Home Economics Women in Business, member of Consumer Relations Committee of the Associated Grocery Manufacturers of America, and chairman for the first all-day Consumer Conference sponsored so successfully in February, 1940, by the Advertising Women of New York. She holds a master of science degree from the University of Washington at Seattle, where the first of the lecture series will be given. She also established the first hospital dietary department in Australia and has been associated with the dairy industry in the United States since 1933.

Dorothy Duckles, Massachusetts General Hospital, Boston, was the author of "Information Please About the Vitamins" in the *American Journal of Nursing* for June 1940.

Jane Sedgwick resigned her position as food administrator, Department of Institutions, State of California, on June 15, and has accepted the position of home economist with the Bureau of Child Hygiene in the Department of Public Health in California, which acts in cooperation with the United States Department of Labor, Children's Bureau. Miss Sedgwick's office address is 306 State Building, Civic Center, San Francisco.

Mrs. Christine R. Pensinger, food and textile adviser, Illinois State Department of Public Welfare, addressed women's civic study groups at Macomb, May 11, and at Chicago and Joliet, May 18, on the topic, "Feeding 65,000 Persons Three Times a Day."

Marguerite Anacker, formerly administrative dietitian at St. Mary's Hospital, Detroit, has been appointed administrative dietitian at Stanford University Hospital, San Francisco. Miss Anacker is a graduate of Milwaukee-Downer College and was a student dietitian at the University of Michigan Hospital in Ann Arbor. Since graduating she has been on the staffs of the Michigan Hospital and the Milwaukee Hospital, and the faculty of Milwaukee-Downer College. Miss Anacker replaces Mrs. Marion Guerrier, who joins the staff of the Hahnemann Hospital, San Francisco.

Clarence H. French. The Standard Gas Equipment Corporation, New York, through Mr. A. W. Jones, writes that Mr. French, for many years manager of the Hotel Equipment Department, died suddenly on July 4. Early in his business career Mr. French was associated with Public Service Electric and Gas Company of New Jersey. Later he returned to the Wil-

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liam M. Crane Company which was merged some years ago with the Standard Gas Equipment Corporation. At the time of his death Mr. French was a member of the Managing Committee of the Industrial Gas Section of the American Gas Association and had been on this committee for a number of years. He served on the Commercial Cooking Committee and also was active on other committees of the food service industry.

British Dietitians in the War. In a letter to Mrs. Marble, Margery Abrams, formerly of St. Bartholomews, London, and now at Three Counties Emergency Hospital, England, writes: "it is a great moment for us here—a privilege not to be too old or too young now the showdown has come, and we hope to live up to the character we give ourselves. I see no reason why we shouldn't weather the storm. People are determined and cheerful—at least all I meet—nurses, cooks, maids, everyone. This is one of the new Ministry of Health Hospitals, and I came at a moment's notice with a little team—a dietitian, an old student from Cambridge, a King's College graduate and two others to organize and run the kitchen. The patients are from the Dunkirk evacuation, English and French chiefly, and not severely wounded, since we are far from the South Coast. Never have you seen anything like their appetites—4000 calories a day, I'm sure! It upsets all your calculations at first."

Alabama Dietetic Association held its fifth annual convention May 4 at the Tutwiler Hotel, Birmingham, with the following program:

World Crisis, Mrs. W. L. Murdock, Birmingham.

Personal Experiences Among the Balkan People, Dr. I. T. Sanders, Alabama College for Women, Montevallo.

Annual Luncheon, It's Your Government, Dr. Roscoe C. Martin, University of Alabama.

Alabama Products Mr. T. J. Twentyman, advertising manager, Loveman, Joseph and Loeb Department Store, Birmingham.

Mental Disease and Vitamin Deficiency, Dr. Jules Gelperin, Birmingham.

The convention closed with a tea served at Howard College, Birmingham, by the home economics students. Newly-elected officers are as follows: president, Mrs. Ina B. Crane, dietitian, University of Alabama; vice-president, Ethel Summerour, dietitian, T. C. I. Hospital, Birmingham; secretary, Anne Gretchmann, home economics teacher, Woodlawn High School, Birmingham; treasurer, Gladys Knight, Home Economics Department, University of Alabama.

California Dietetic Association. The Bay Section met in May at Mt. Zion Hospital. Dr. W. W. Wainright, University of California dental staff, told of his experiments on the "Role of Lacto-Acidophilous Bacillus in Connection with Dental Caries." The June meeting was a barbecue dinner at Fairmont Hospital.

Members of this section requested the University of California Extension Division to include a refresher course in diet therapy, beginning this September.

Officers for the section for 1940–41 are: chairman, Edith Yokela, Mary's Help Hospital; vice-chairman, Fay Phinney, San Jose Hospital; secretary-treasurer, Evelyn Mueller, Consultant.

The Santa Barbara Section closed the meetings for the year with their annual picnic at the home of Louisa Long. Officers for the coming year are: chairman, Martha Smith; vice-chairman, Helen Moss; secretary and treasurer, Winifred Halversen.

Considerable material has been collected for the compilation of a table showing the approximate vitamin content of average servings of food. The group hopes to complete this work during the coming year.

Elsie Jo Nelson, chairman of the Los Angeles Section, entertained 13 dietitians at a beach party in Santa Monica for Miss Plummer of General Foods, Inc., and Miss Wood of United Fruit Company. Mrs. Norma Newton of the Los Angeles Bureau of Power & Light and Mrs. Gladys Childress of the Kellogg Company were among the guests.

Clancy Morrison of the California Lutheran Hospital has returned from a 6 weeks' vacation in Alabama and Florida. She suggests that the South is the place for relaxation.

Mrs. Reeva Hinyan Grund is chairman of the Red Cross Canteen Committee of the Los Angeles Chapter. The Los Angeles section

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The owners of the *Compilation of Diets* have added three new sheets to their book: Diet for Hyperinsulinism; Low Sodium Chloride Diet for Ménière's Disease; and High Acid-Ash Diet.

Octavie de Beaulieu has just completed a new beach home at Lido Island, Balboa Bay.

A group of eight dietitians from Los Angeles attended the state convention at Del Monte in August.

The 136th meeting of the Los Angeles Section was held at the Adohr Certified Farm, June 3, with 65 members and guests present. After a tour of the various departments of the dairy a delicious steak barbecue dinner was served by the commissary department. Miss Nelson, chairman, introduced Dr. Nutall, president of the Milk Commission of the Los Angeles County Medical Association, who spoke on the history of certified milk and the organization of the Milk Commissions. The following officers were elected for 1940-41: chairman, Octavie de Beaulieu; vice-chairman, Lucille Waite; secretary-treasurer, Helen Hoover.

Florida Dietetic Association. According to the *News Letter* for May, officers and section chairmen for 1940-1941 are as follows: president, Helen Davis, State Tuberculosis Sanatorium, Orlando; vice-president, to be appointed; secretary-treasurer, Agnes Sawby, Flagler Hospital, St. Augustine; delegate to House of Delegates, A.D.A., Jennie Tilt, Florida State College for Women; Administration, Eleanor Green, Florida State College for Women; Community Education, Erma Feinberg, Mainland High School, Daytona Beach; Diet Therapy, Lola Schmidt, Florida State College for Women; and Professional Education, Minna C. Denton, University of Tampa.

Student dietitians for 1940 at Florida State College for Women were Amelia Magee, University of Alabama; Marianne Zimmerman, College of St. Teresa, Minnesota; Margaret Shatswell, Radcliffe College; Elizabeth Freeland, University of North Carolina; and Ruth Reed, Iowa State College. The students journeyed to New Orleans for a three-day field trip in April, visiting the Old French Market, Tujague Wholesale Produce Company, Reily Cafeteria system, the Banana Pier, United Fruit Company, the Public School Cafeteria system, Rabouin Trade School, kitchens of the Hotel Roosevelt and the Morrison Cafeteria, and the Dietary Department of Charity Hospital.

Maryland Dietetic Association. At the annual business meeting held at Johns Hopkins Hospital, May 13, the following officers were elected: president, Helen Schmit; vice-president, E. M. Geraghty; secretary, Ethel Olney; and treasurer, Ruth Graham. Mary I. Barber, president-elect, A.D.A., was the speaker. Preceding the meeting, Phyllis Rowe and Kathleen Lewis were hostesses at a dinner for Miss Barber at the Hopkins Faculty Club.

Miss Schmit has appointed the following section chairmen to serve for the coming year: Administration, Vera Stemple; Community Education, Mrs. Alice Lambert; Diet Therapy, Helen Baughman; Professional Education, Mrs. Colleen Cox Hambleton.

The Community Education Section has continued its broadcasts this year as a short series of dramatizations. Mary Lee Aylesworth, Mrs. Lambert, and the radio announcer, Mr. William Herson, participated. On April 27, the subject was "Diet and Underweight"; on May 4, "Diet and Indigestion"; and on May 11, "Diet and Allergy." Several more were scheduled but had to be cancelled because of special war broadcasts from Europe.

Mary Lee Aylesworth, Jeanne Daubert, Lucille Gifford, Jane Julian, Betty MacDaniels, Marietta Pierce and Margaretta Schenbecker completed their student training course at the Johns Hopkins Hospital on June 30.

Hermiene Meyers, a graduate of the Michael Reese Hospital, Chicago, and Nell McCoy Shearer, a graduate of the Duke University Hospital, Durham, N. C., have been assigned as relief dietitians at the Johns Hopkins Hospital.

Theodora Peck, a graduate of the Johns Hopkins Hospital who is studying medicine at George Washington University was on the staff of the Johns Hopkins Hospital Dietary Department during the summer.

Barbara Griffin, a graduate of the Food Clinic course at the Boston Dispensary, assisted in the Johns Hopkins Hospital Food Clinic during the summer.

WANTED

JOURNAL
of The American Dietetic Association

Vol. XVI - No. 3 - March 1940

BULLETIN
of The American Dietetic Association

August 1923
September 1924

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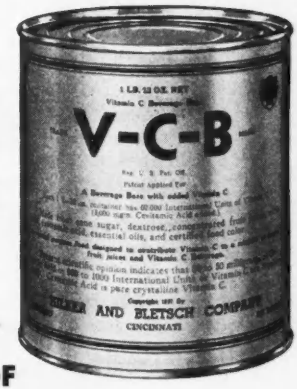

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Jane Julian, recent graduate of the student training course, Johns Hopkins Hospital, is to be assistant director of halls at Vassar College, Poughkeepsie, N. Y.

Ruth Graham, staff member of the Johns Hopkins Hospital for the past two years, has accepted an appointment as assistant dietitian at the Royal Jubilee Hospital, Victoria, British Columbia.

Announcements have been received of the marriage on June 2 of Floreine Dietrich to Mr. William Allen, and that of Vesta Spurgeon to Mr. Richard Odell. Mrs. Allen and Mrs. Odell are graduates of the student training course at the Johns Hopkins Hospital.

Massachusetts Dietetic Association. The following officers were elected for 1940-1941: president, Dorothy Duckles, Massachusetts General Hospital; vice-president, Ruth Spencer, Massachusetts General Hospital; treasurer, Margaret McGovern, Boston City Hospital; corresponding secretary, Dorothy Schuerch, Beverly Hospital; and recording secretary, Grace Wallace, Newton High School.

The annual business meeting was held May 18 at the Women's Educational and Industrial Union directly after the refresher course luncheon.

Eva Ostberg, formerly of the Boston City Hospital, is taking the place of Mrs. Carolyn Petitts at the Women's Free Hospital, Brookline.

Mrs. Helen Wollan, treasurer of the Massachusetts Dietetic Association, has announced the birth of a daughter at the Baker Memorial, Massachusetts General Hospital.

The Social Service Employees Union of Boston sponsored an open meeting in April. Professor Dorothy Douglas, Smith College, spoke on "The Effect of the War on Social Services." On the same program, Charlotte Raymond, community nutritionist, Newton, gave a brief talk on "War and Prices."

The Social Welfare and Public Health Section of the Eastern Massachusetts Home Economics Association has elected Irene Goodhue, assistant nutritionist, Forsyth Dental Infirmary, as chairman, and Rae Goldberg, chief, Food Clinic, Beth Israel Hospital, as corresponding secretary for 1940-41.

The Diet Therapy Committee has published a manual which is a compilation of therapeutic diets used in Massachusetts hospitals. It contains instructive general information and an extensive number of diets which are grouped under similar headings. In most of the diets listed, a comparison is made, in chart form, between the diet régimes used in the different hospitals. The price is $1.00 plus a mailing charge of 15 cents.

Lois Hammett, formerly on the staff of the Massachusetts General Hospital, has accepted a position at the Massachusetts Memorial Hospitals, Boston.

Jane Griswold, a former student at Johns Hopkins Hospital and an assistant at the New England Deaconess Hospital for the past three years, has accepted a position as head dietitian at the Springfield Hospital, Springfield.

Myrtle Tierney, assistant dietitian at the Deaconess Hospital, in charge of the George F. Baker Clinic building, was married in Chicago to Dr. Lloyd Evans, an intern at the Peter Bent Brigham Hospital.

Esther Fillmore, dietitian in charge of the Palmer Memorial dietary department, and a former Beth Israel student, announced her marriage in August to Dr. Edward Pratt of Great Barrington. Dr. Pratt is an intern at the Children's Hospital.

Sarah Evans has taken a position as assistant dietitian in charge of the Diabetic Kitchen, replacing Diamond Ballin.

Maxine Sievers, former Peter Bent Brigham student, has accepted the position at the Deaconess Hospital vacated by Miss Griswold.

Ruth Buckman, dietitian at the Women's Free Hospital, Brookline, is to be head dietitian at Sinai Hospital, Baltimore.

Mrs. Ruth Button Fletcher, assistant dietitian at Children's Hospital, expects to be at the University Hospital in Ann Arbor, Michigan, this fall.

Claudia Stallworth, student at Peter Bent Brigham Hospital, assisted during August at the Deaconess Hospital.

Marjorie Underwood, June graduate of Peter Bent Brigham Hospital, has accepted the position of assistant dietitian at the Homeopathic Hospital, Providence.

Mrs. Dorothy Brigham Stenz, former student

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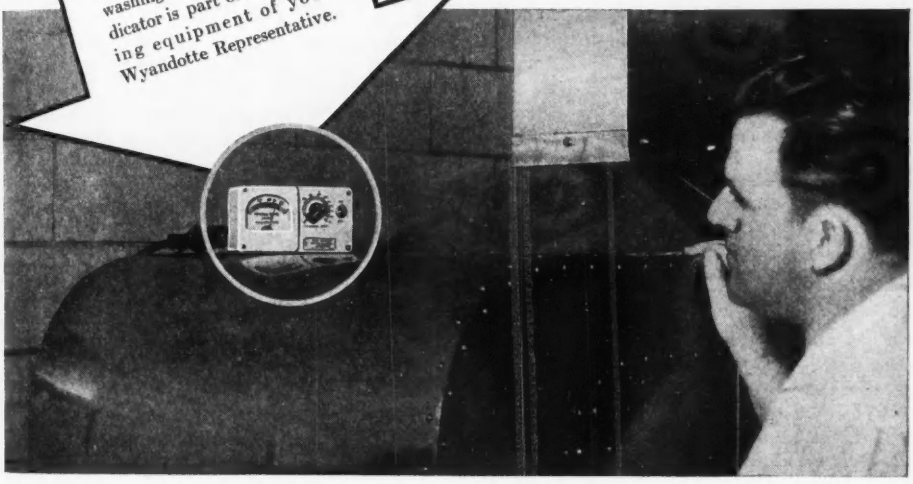

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SERVICE REPRESENTATIVES IN 88 CITIES

at Beth Israel Hospital, assisted in the Serving Room during August at the Beth Israel Hospital.

The state association is sponsoring the American Dietetic Association exhibit at the American Hospital Association meeting in Boston this September. Maniza Moore is chairman of the committee in charge of the exhibit.

Ellen Mary Morse, Beth Israel Hospital student dietitian, was an assistant during the summer at Children's Hospital.

Elizabeth Agnew, student of Beth Israel Hospital, has accepted a position as assistant at the Rhode Island General Hospital.

Alma Hersey, graduate of the Beth Israel Hospital, is now assistant dietitian at the New England Baptist Hospital.

Pearl Williams, a graduate student of the Food Clinic Course, 1939, is now on the staff of the Food Clinic with special work in adult health education. She has developed a series of sheets for visual education, one for each vitamin, stating the purpose and body needs per day. These are illustrated with pictures of the servings of foods and their vitamin content in International units.

Mildred Barry, a graduate student of the Food Clinic Course, 1940, substituted in the Food Clinic for members of the staff during their vacations. Beginning September 15, she will organize a Food Clinic at St. Joseph's Hospital, Providence.

Ruth Dickinson, graduate student of the Food Clinic Course, 1940, was employed as camp nutrition director at the Greenfield Health Camp, Greenfield.

Barbara Griffin, graduate of the Food Clinic Course, 1940, substituted on the Food Clinic staff at Johns Hopkins Hospital during the summer months.

Susan Merrow, graduate student of the Food Clinic Course, 1940, assisted during August at the Food Clinic of the Beth Israel Hospital.

Audrey Brown, undergraduate student at Nasson College, Springvale, Maine, and Amy Epstein, Framingham State Teachers College, did volunteer work in the Food Clinic during the summer.

Minnesota Dietetic Association met on May 24 at the Nicollet Hotel, Minneapolis. The program, planned by the Community Education Section, headed by Lois Frank, included: Dr. G. A. Vacha, chief bacteriologist, Department of Agriculture, State of Minnesota, "The New Food and Drug Act and the Minnesota Food Laws"; and Celia B. Frederickson, associate state director, Home Management Farm Security Administration, "A Discussion of the Nutrition Work of the Farm Security Administration and Some of the Results Obtained."

Officers elected for 1940–41 were as follows: president: Chrissa Wendt; vice-president, Martha Otto; recording secretary, Thelma Hara; corresponding secretary, Angeline Mannick; treasurer, Mildred Hinicker.

On April 19 Miss Mannick and Elizabeth Ryan of the University Hospitals spoke over WMIN on the duties of the dietitian, types of special diets usually encountered in the hospital, and the patient's attitude toward his or her diet.

Marie Fahey is now chief dietitian at Sunnyside Sanatorium, Indianapolis. Her successor at Glen Lake is Helen Gilberg, formerly of Ancker Hospital.

Lillian Elsholtz is now at Queen's Hospital, Honolulu. Lydia Nelson will replace Miss Elsholtz as chairman of the Professional Education Section.

Leora Briese, formerly of the Bryn Mawr Hospital, Philadelphia, is now on the staff of the Rochester Diet Kitchen.

Hermia Handt, Union Hospital, New Ulm, has enrolled in the dietitians' reserve, American Red Cross.

Dr. Eva Donelson, Dr. Jane Leichsenring and Lucille Wall attended the Fifth Conference of the Cooperative Nutrition Association of the North Central States at Manhattan, Kansas. Prior to this Dr. Donelson presented a paper on "The Selection of Children for a Nutrition Clinic", based on the work of Agnes Larson, nutritionist for the St. Paul schools, before the annual meeting of the Physical Education, Health and Recreation Section of the N. E. A. at Chicago.

Mabel Perry, dietitian in the Nutrition Clinic, New York Hospital, is attending the University of Minnesota, working toward her master's degree with a major in physiological chemistry. The subject of her thesis is "The Effect of Increased Fluorine Intake on the Composition of Teeth of Adult Animals."

Geraldine Graves, formerly of the Hastings and Anoka State Hospitals, has been appointed

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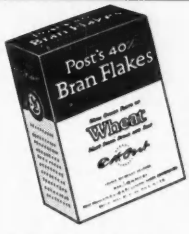

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nutritionist on the staff of the State Division of Social Welfare. Vivian Ory has replaced Miss Graves at Hastings and Anoka.

Missouri Dietetic Association. The following are the elected officers for the year 1940-41: president, Mrs. Vera Davis, General Hospital, Kansas City; vice-president, Rachel Reed, Kansas City Dairy Council, Kansas City; secretary, L. Marguerite Edwards, State Hospital No. 3, Nevada; treasurer, Lillian Karnes, U. S. Medical Center, Springfield; Nominating Committee, Dr. Bertha Bisbey, University of Missouri; Mrs. E. Lee Shrader, 6650 Waterman, University City; Marion Keller, State Hospital No. 2, St. Joseph; Fae Buckle, Research Hospital, Kansas City; Grace Zerbolio, Barnes Hospital, St. Louis. Section chairmen are: Administration, Theodora Stebbins, Koch Hospital, Koch; Community Education, Dorothy Dolan, St. Louis County Hospital, Clayton; Diet Therapy, Mary Catherine St. John, Firmin Desloge Hospital, St. Louis; Professional Education, Louise Wilkonson, Barnes Hospital, St. Louis.

The delegate to the House of Delegates is Ethel Ollis, Research Hospital, Kansas City. Committee chairmen are: Membership, L. Marguerite Edwards; and Program, Mrs. E. Lee Shrader.

Montana Dietetic Association held the annual meeting at the Placer Hotel, Helena, May 8, at which time the following officers were elected: president, Helen Bennett, St. Peter's Hospital, Helena; vice-president, Harriette Schneider, Deaconess Hospital, Bozeman; secretary, Elsie Fulke, Montana State College, Bozeman; and treasurer, Mila Turner, Murray Hospital, Butte. The program was as follows: Dr. R. Wynne Morris, Northwest Clinic, "Child Nutrition"; Mildred Leigh, Montana State College, "A. D. A. Meeting in Los Angeles"; Harriette Schneider, "Northwest Dietetic Association Meeting." Membership of the Montana Dietetic Association has reached a total of 30. The annual meeting in 1931 will be held jointly with that of the Montana Home Economics Association.

Nebraska Dietetic Association met with the Nebraska Hospital Assembly on March 27. The opening session was devoted to the discussion of dietetic problems with the following program: "Nutrition and Dental Caries", Dr. Ralph Ireland, College of Dentistry, University of Nebraska; Dr. George Underwood, "Nephritis and Nephrosis"; Dr. Ruth Leverton, Research Department, College of Agriculture, University of Nebraska, "Iron Metabolism". The afternoon session was a joint program with the Nebraska Hospital Assembly and allied groups.

The Omaha dietitians enjoyed a very interesting dinner meeting at the University Hospital on April 1. Dr. John LeMar discussed "Communicable Diseases, a Comparative Study Made in the Nurses' Training Schools of the Omaha Hospitals".

Leota Davis, assistant dietitian, St. Joseph's Hospital, Omaha, has resigned her position.

Anna M. Streitz has been appointed dietitian at Lutheran Hospital, Omaha.

Angeline Phillips, chief dietitian, University Hospital, and secretary, American Dietetic Association, was married to Dr. Clarence Bantin, Omaha, on July 13. Miss Phillips is resigning her position.

Dorothy Ward, assistant dietitian, Methodist Hospital, Omaha, was married to Dr. William T. Mautz, June 11. Mrs. Mautz is continuing her work at the hospital.

In cooperation with the local Health and Nutrition Council, the Omaha Dietetic Association sponsored a panel discussion on "The Adequate Diet" before a P. T. A. group on April 16. The discussion included essentials of an adequate diet, menu planning, selection and purchasing of food, correct methods of preparation, and food fads and fallacies. Those participating were: Vesta Davis, St. Joseph's Hospital; Margaret Breuchert, Immanuel Hospital; Ardith Wick, University Hospital; and Lydia Beck, Methodist Hospital. Angeline Phillips was the leader of the group.

A camp for diabetic girls between the ages of 12 and 15 years was opened on June 9 at Coryell Park, Brock, Nebraska. Della Caster, secretary of the state organization, was the camp director and nutrition instructor.

New Jersey Dietetic Association held their annual meeting on June 7 with the New Jersey Hospital Association at Atlantic City. Mem-

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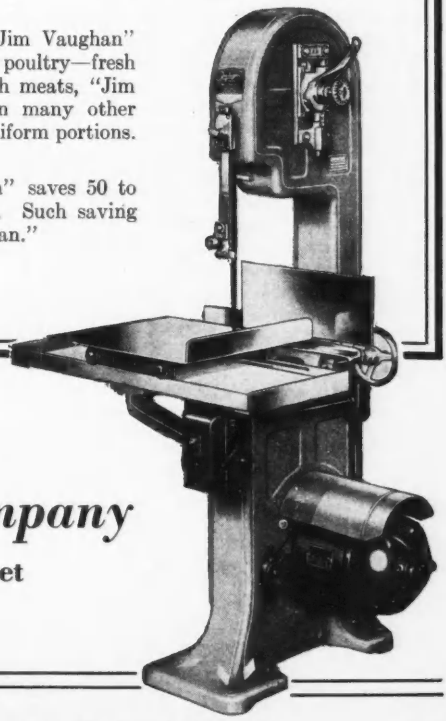

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bers of the hospital association were invited to a luncheon at which Raymond Sloane, editor of *Modern Hospital*, spoke on "Outside Interests For The Dietitian". An exhibit showing methods of "Learning Through Looking" was an interesting feature of the meeting. Various phases of the exhibit were prepared by members of the dietetic association.

Lucile Cover, student dietitian of the New Jersey Cooperative Course and a graduate of Madison College, Virginia, has accepted a position as assistant dietitian at the Post-Graduate Hospital, New York.

Sophia L. Morris has returned from an extended motor trip through Ohio, New York and New England.

Peg McCoy is spending the coming year at Cornell University doing graduate work.

Alberta Dent spent part of her vacation taking work at The Boston Dispensary Food Clinic.

Ruth Taborn was married to Dr. C. S. Bond on June 16.

New York State Dietetic Association. Henderika Rynbergen, president of the association, has appointed her Executive Committee which includes the president-elect, Mrs. Ethel Lewis Marth, Highland Hospital, Rochester; vice-president, Marie C. Sisson, Meyer Memorial Hospital, Buffalo; secretary, Genevieve Coon, Albany Hospital; treasurer, Genevieve Moyer, Albany Hospital; constitution chairman, Mame T. Porter, State Department of Welfare, Albany; historian, Laura Comstock, Eastman Kodak Company, Rochester; chairman, Nominating Committee, Martha P. Deal, Samaritan Hospital, Troy; member, House of Delegates, Blanche Bohach, Rochester General Hospital; and editor of the *Bulletin*, Eleanora Sense.

The section chairmen who will carry on the state activities for the programs outlined by the A. D. A. are: Administration, Dorothea Behm, Central High School, Syracuse; Diet Therapy, Lois M. Dorr, Fayetteville; Community Education, Elizabeth Henry, Rochester Visiting Nurse Association; and Professional Education, Mame T. Porter.

The 1941 convention will be held in Buffalo. Ursula Senn is chairman of Local Arrangements and Margaret Fotheringham, Program chairman.

Dr. and Mrs. Charles Fordyce (Mrs. Fordyce is president of the Rochester Dietetic Association) announced the birth of a daughter, Betsey Ann, March 17.

The Executive Committee for the Greater New York Dietetic Association for 1940-41 has been announced by the newly elected president, Dorothy Stephens, New York Post-Graduate Hospital, as follows: vice-president, Mary Ruth Curfman, St. Luke's Hospital; secretary, Margaret Anderson, Norwegian Hospital; and treasurer, Helen Cothran, St. John's Riverside Hospital, Yonkers. The section chairmen are: Professional Education, Marie Horst, Montefiore Hospital; Community Education, Ann Gibbons, Bellevue Hospital; Diet Therapy, Beatrice Braun, Presbyterian Hospital; and Administration, Rachel Mayhew, Roosevelt Hospital. The other committee chairmen are: Program, Ina Lindman, United Fruit Company; Public Information, Barbara Anderson, *Parent's Magazine*; Membership, Dorothy Belmanno, The Borden Company; Nominating, Bertha Nettleton, General Foods; Finance, Bertha Ashley, St. John's Riverside Hospital, Yonkers; Service Bureau, Dorothy DeHart, Roosevelt Hospital; Student Activities (senior), Kassie Biros, Grasslands Hospital, Valhalla; and Student Activities (junior), Margaret Byrne, New York Hospital.

North Carolina Dietetic Association. The following officers were elected at the annual business meeting, April 6, to take office September 1, 1940: president, Mrs. Eloyse S. Milner; president-elect, Jane Hereford; vice-president, Blanche Tansil; secretary, Evelyn Gibson; treasurer, Frances Hill; nominating committee, Roberta Jones, chairman, Mrs. Grace Tewkesbury, Sara Boyd Pickett, Cleone Boyd and Mabel Swanson. Committee chairmen appointed by Mrs. Milner are: Professional Education, Roberta Jones; Diet Therapy, Tiphaine Burgess; Administration, Mabel Swanson; Community Education, French Boyd. A motion was made and carried that the editor of the *Bulletin* and the business manager be members ex-officio of the Executive Committee.

Mrs. Milner has resigned as director of school cafeterias in Greensboro and will direct the cafeteria at the University of North Carolina, Chapel Hill.

Ada Hawe, Duke University, has directed a

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Sucrose	31.3	4.3
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series of four radio programs over WDNC, as follows: "What it Means to be a Dietitian", Gladys Dickinson, Watts Hospital; "The Adequate Diet", Arthealia Mitchell, Duke Hospital; "Adequate Diets at Various Cost Levels", Frances Ellis, Watts Hospital; and "Food Facts and Frauds—Dietary Delusions Debunked", Mildred Duff, Duke Hospital.

Oklahoma Dietetic Association. According to the *Dietitian*, official bulletin of the association, Oklahoma A. and M. College has nine graduate dietitians supervising food service at dormitories and cafeterias; the Oklahoma City Y. W. C. A., two as food directors; and the WPA School Lunch Program, Federal Works Agency, Oklahoma City, five as directors.

Mrs. Josephine McCulley Barr, formerly of St. Anthony's Hospital, is now therapeutic dietitian at the Veterans Hospital, Lincoln, Nebraska.

Pennsylvania Dietetic Association. The eighth annual meeting was held at Buck Hill Falls, May 30–June 1.

On May 30, Dr. Lo Chu'an Fang, professor of psychology at Central China College, Wuchang, spoke on "The Foreigner in China." The Northeastern Pennsylvania Dietetic Association entertained with a tea on the afternoon of the same day to celebrate their tenth anniversary.

The discussions presented on May 31 were as follows: "The Nutrition Problems of a Public Health Nurse", Catherine Colle, supervising public health nurse, American Red Cross, Lackawanna County; "The Food Stamp Plan", Mr. Kris P. Bemis, Federal Surplus Commodities Corporation; "Standard Specifications for Fresh Fruits and Vegetables", Elizabeth Rugh, nutrition director, Veterans Administration Facility, New York; "As a Medical Director Sees the Dietitian", Dr. Joseph Doane, medical director, The Jewish Hospital, Philadelphia; and "Problems in the College Training of the Dietitian", Grace Godfrey, dean of home economics, Drexel Institute, Philadelphia. Mary B. McAndrew, superintendent of schools, Carbondale, spoke on "Modern Educational Trends" at the dinner that evening.

Elizabeth Bitzer, dietitian, Allentown Hospital, presided at the morning sessions on June 1 with the following program: Dr. A. J. Luchi, chief, Medical Staff, Mercy Hospital, Wilkes-Barre, "Feeding the Foreign Born Diabetic"; Dr. F. J. Conlan, chief, Surgical Staff, Pittston Hospital, "Water Metabolism". The luncheon on Friday was held at Pocono Manor with Florence Peters, president-elect, presiding. Mary I. Barber, president-elect of the American Dietetic Association, spoke on the topic, "Obediently Yours." Later, on the same afternoon, members of the association were guests at a tea given by Emma Smedley at Idylease Cottage, Pocono Manor.

Pittsburgh Dietetic Association. Officers and members of the Pennsylvania Dietetic Association have joined unanimously in re-extending their invitation to the American Dietetic Association that the 1942 convention be held in Pittsburgh.

Mrs. Connors of Kaumnann's Dining Rooms invited the members to a joint dinner meeting with the HEWIBS on May 24 at the College Club. Margaret Mitchell, Wearever Aluminum Company, was the guest speaker.

Mary Frost is now assistant dietitian at the Children's Hospital. She was formerly dietition at Glenwood State School.

Mary Louis Chippinger is now dietitian at the Butler Memorial Hospital, Butler, Pennsylvania.

Mary Wendell, formerly of Mercy Hospital, Elwood, Indiana, is now assistant dietitian at the Allegheny General Hospital.

Mary Letherman, formerly of Memorial Hospital, Lancaster, Ohio, is now assistant dietitian at the Presbyterian Hospital.

The last meeting of the season was held at the Presbyterian Hospital on June 4 with Dr. J. H. Baroch speaking on "Insulin Therapy."

The annual picnic was held at the D. T. Watson Home, Leetsdale, June 18. Dorothy Nicholson, chief dietitian at the Home, was in charge of arrangements.

Mrs. Marion Erven Gordon has announced the birth of a daughter, Ruth, on May 17. Mrs. Gordon was a student at the Shadyside Hospital and is now with the Dairy Council in Youngstown, Ohio.

Dolly Mabel Swishen, a graduate of Western Reserve University and West Penn Hospital

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dietetic course, is in charge of nutrition in the Renziehausen Camp for diabetic children.

Jean Eller, graduate of the student dietetic course at West Penn Hospital, and dietitian at the Community Hospital, Kane, Pennsylvania, was married to Mr. Swanson of the Civil Service Commission.

Audrey Oakley, nutritionist, Pittsburgh District Dairy Council, spoke over KDKA on "Nutrition" under the auspices of The Dairymen's Cooperative Association.

Francis Peck, home economics director, H. J. Heinz Company, helped organize and open the Heinz exhibit at the New York World's Fair.

Audrey Oakley, Dorothy Davidson and Francis Peck attended the American Home Economics Association convention in Cleveland, June 23–27.

Dorothy Davidson, nutritionist, Public Health Nursing Association, conducted a discussion on "Problems of Nutrition in Low Income Families" at the Pennsylvania Conference on Social Work at Washington and Jefferson College, Washington, Pennsylvania, June 13. Miss Davidson was the presiding officer at the community nutritionists' luncheon at the American Home Economics Association convention.

Officers for the coming year are: president, Jennie Barton, Presbyterian Hospital; vice-president, Helen Jackson, Columbia Hospital; secretary, Audrey Oakley, Pittsburgh District Dairy Council; treasurer, Nora Kurtz, Children's Hospital. Committee chairmen are: Membership, Alene Ness, Shadyside Hospital; Hospitality, Jeannette Morris, McGee Hospital; Program, Dorothy Nicholson, D. T. Watson Home; and Publicity, Dorothy Davidson, nutritionist, Public Health Nursing Association.

Rhode Island Dietetic Association. Dr. Marietta Eichelberger, director, Nutrition Service, Evaporated Milk Association, spoke at the May meeting on "The Importance of Economical Milk in Human Nutrition."

The annual meeting was held June 4 preceding dinner at the Providence Plantations Club. The Nominating Committee reported the following officers for the coming year: president, Ruth Fitch; vice-president, Catharine Heilmann; secretary, Charlotte Haupt; treasurer, Eleanor Johnson; and Nominating Committee, Elsie Ewertz, chairman, Florence Miller and Eleanor Wells.

After the business meeting and dinner Mary I. Barber, president-elect, A. D. A., spoke on the topic "Obediently Yours" which concerned the organization of the A. D. A.

New members in the association are: Dorothy Levy, Miriam Hospital, Providence; Helen Baclawski, State Infirmary, Howard; Marion Congdon, Watson House, Rhode Island State College, Kingston.

Rochester Dietetic Association. The association completed another of their successful series of radio broadcasts this year. As in previous years the series was sponsored by the Medical Society of the County of Monroe. Dr. M. E. Fairbank of the Medical Society of the County of Monroe introduced the broadcasts which were as follows: "Your 1940 Weight Chart," Esther Rhodes; "The Housewife Goes Shopping," Eleanor M. Fordyce; "Budget and Food Values," Margaret Bacon and Laura Comstock; "The Role of Vitamins in Nutrition," Estelle Hawley.

An account by Effie May Winger of the exhibit placed by the Rochester Dietetic Association in the museum of the Academy of Medicine, will appear in the October JOURNAL. In connection with the exhibit Miss Winger participated in a broadcast on "Community Health" which described the exhibit and told what the dietitians of Rochester have to offer to the community.

At the invitation of Dr. John R. Williams, autographed photographs of the following women selected by the Rochester Dietetic Association as having made outstanding contributions to the development of the dietetic profession and the science of nutrition, have been hung in the Academy of Medicine at Rochester: Dr. Mary deGarmo Bryan, Marie Casteen, Laura Comstock, Lenna F. Cooper, S. Margaret Gillam, Lucy Gillett, Lulu G. Graves, Mary P. Huddleson, Dr. May Mellanby, Dr. Agnes Fay Morgan, Frances Stern, Dr. Mary Swartz Rose, Dr. Hazel Munsell and Dr. Ruth Wheeler.

St. Louis Dietetic Association ended its 1939–40 season with a picnic on the veranda of Jewish Hospital Nurses' Home. There was a

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large attendance. Florence King, superintendent of Jewish Hospital, was a special guest.

Jane Adams, St. Louis County Hospital, accepted the position of head dietitian at Grant Hospital, Chicago, beginning July 1.

Dorothy Dolan has resigned her position at Alexian Brothers Hospital to become dietitian at St. Louis County Hospital.

Louise Osbourne has replaced Sophia Heend, who resigned as assistant dietitian at Jewish Hospital.

Isabel Grasser Simpson has resigned at Barnes Hospital to join her husband who is practicing medicine.

Mary Abbie Sherwood of Barnes Hospital is now dietitian at Noyes' Hospital, University of Missouri, Columbia.

Henrietta Becker of Presbyterian Hospital, New York, and Mary Edna Aschenbrener have replaced Mrs. Simpson and Miss Sherwood at Barnes Hospital.

Alta Stone has joined the dietetic staff at Veterans Hospital, Jefferson Barracks.

Addie B. Cathrae has resigned at Missouri Baptist Hospital, and will live at home.

Wilhelmina Murphy has replaced Miss Carthrae at Missouri Baptist Hospital.

Regina Gottlieb, chief dietitian at Missouri Baptist Hospital, has resigned to become chief dietitian at Mt. Sinai Hospital, Chicago.

Mrs. Louis Hershey has accepted the position of dietitian at Isolation Hospital.

Mildred Jenkins has replaced Mrs. Dames as chief dietitian at Homer Phillips Hospital. Mrs. Dames is living in California.

Texas Dietetic Association. Officers of the Dallas Dietetic Association for 1940-41 are as follows: president, Rose Richter, Methodist Hospital, Dallas; vice-president, Dr. Laura McLaughlin, Texas State College for Women, Denton; secretary, Elizabeth Atkerson, Parkland Hospital, Dallas; treasurer, Ruth Heckler, Technical High School, Dallas. Dr. Ercel Eppright, Texas State College for Women, discussed "What's New in Nutrition and Research" and distributed printed information on vitamins.

Rosa Spearman, director of Dallas Public School Lunchrooms, attended the summer session of Florida State College for Women where Dr. Grace Augustine, head, Institution Management, Texas State College for Women, was on the summer teaching staff.

Olive Black is now cafeteria manager of the Government Flying School at Love Field, Dallas.

Helen Singleton of Groesbeck, foods graduate of Texas State College for Women, is working with Dr. Phillip Murphy, Dallas orthodontist, who is specializing in the causes of dental decay. Her work, which is being supervised by a member of the A. D. A., includes the reduction of acidophilus bacillus of the saliva by controlling the carbohydrate intake.

Helen Stone, head of the Foods Department, North Texas Agricultural College, Arlington, attended summer school at Columbia University.

On May 24 Irene Hardy was hostess at a dinner meeting of the South Texas Dietetic Association at "Three Acres." Officers for 1940-41 were elected as follows: president, Gladys Lyons, Jefferson Davis Hospital; vice-president, Mary E. Smith, Memorial Hospital; secretary-treasurer, Blake Patrick, Memorial Hospital; member-at-large, Clara Mathes, John Sealy Hospital, Galveston.

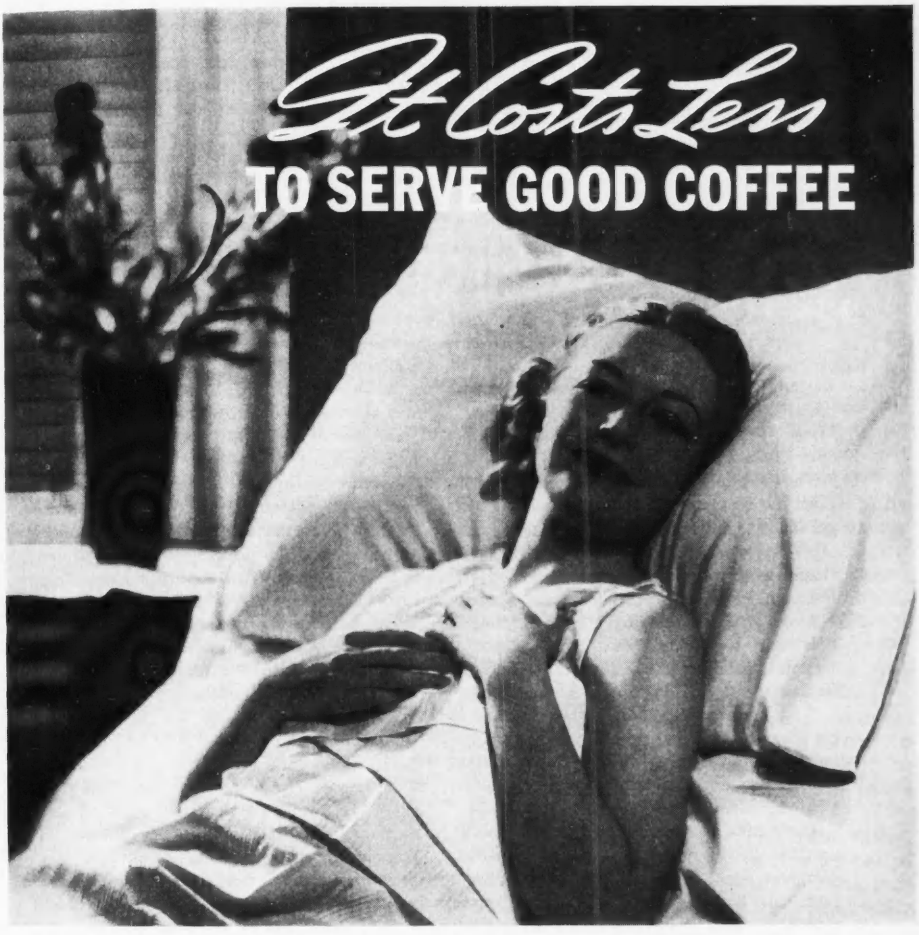
Inez New, Methodist Hospital, Houston, attended summer school at Texas State College for Women, and Lou Elva Eller, director of lunchrooms, Houston Public Schools, attended a refresher course at Florida State College for Women.

Kathleen Wilcoxson, assistant dietitian, Hermann Hospital, was married on April 16 to Mr. Lester Gradwohl. Her address is 2021½ Quinby.

Tony Bracher, hostess of the Houston Country Club for the past two years, accepted the position of manager of the club on June 1.

Virginia Dietetic Association held their annual meeting at the Cavalier Hotel, Virginia Beach, April 26-27. The registration was the largest at an independent meeting to date, and for the first time the association had commercial exhibits. The educational exhibit, planned and arranged by Mrs. Eula Porter Robins, Mary Washington College, was unusually well presented.

At the first session, a luncheon meeting, Gladys Wyckoff, field secretary, American Home Economics Association, spoke on "Teaching Nutrition in the Lunch-room and Class



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Room" and Mrs. Alice P. Sells, Columbia University, told of "Opportunities for Dietitians."

The Assembly of Tidewater Women of Virginia invited the association to visit Cape Henry and attend the Governor's Ball commemorating the first landing of Captain John Smith.

At the banquet on April 26, Frances MacKinnon, chairman, Diet Therapy Section, American Dietetic Association, spoke on "Recent Procedures in Diet Therapy."

On the following day speakers included: Dr. Arthur Perkins, medical director, Norfolk General Hospital, "Hospital Administration, Better Quarter"; Dr. Florence Armstrong, Social Security Board, Washington, D. C., "Basic Concepts in Research on Adequacy of Social Insurance Payments."

The following officers were elected: president, Lois Watts, Grace Hospital, Richmond; vice-president, Bertha Ide, Norfolk General Hospital; secretary, Lois Woodward, University Commons, University; and treasurer, Margaret Fitzhugh, director, School Cafeterias, Richmond.

At the luncheon following, Dr. Hazel Munsell, Columbia University, spoke on "Practical Aspects of Recent Findings in Vitamin Research."

A new local association has been formed in the state, composed of members from Harrisonburg, Charlottesville, and nearby localities. This makes four organized local groups in Virginia.

At the May meeting of the Richmond association the following officers were elected: president, Margaret Bock, Westbrook Sanatorium; vice-president, Bertha Jenkins, Richmond Dairy; secretary, Mabel Gladdin, St. Elizabeth Hospital; and treasurer, Harriet Stevens, Medical College of Virginia. The Richmond association has published two numbers of the *Bugle*, a news letter for the dietitians of the state. At the state meeting the association voted to assume the publication of the paper in the future.

Washington Dietetic Association. The association closed the 1939-40 year with a dinner meeting on June 4 at the Gowman Hotel. Two of Seattle's most prominent physicians, Drs. C. W. Knudson and Edwin Nixon, spoke on "The Doctor's Viewpoint of Socialized Medicine." New officers were elected as follows: president, Dorothy Anderson; president-elect, Eleanor Gerst; vice-president, Flora McLaughlin; secretary, Daisy Anderson; and treasurer, Betty Harris.

The first meeting of the season was held in September in the Chinese Room of the Smith Tower at which time reports of the Los Angeles convention were presented by several members.

In November, Ruth Forsberg, Swedish Hospital, acted as hostess, conducting a tour through the newly equipped kitchen. Margaret Terrill, University of Washington School of Home Economics, presented a report on equipment.

In December a Christmas buffet supper was served at the Women's University Club, and association projects for the year were initiated in January.

Several of the Washington State members were in attendance at the Northwest Convention at Timberline Lodge in April. Movies were taken at Timberline by Dorothy Anderson and will be presented at the first meeting of the 1940-41 season.

The dietetic association is acting as a consultant to the Washington State Planning Council on matters of nutrition.

Mary Brakel, who has been working in New Orleans, has returned to the Ryther Child Center in Seattle.

Betty Kerr has succeeded Evelyn Hanselman at Maynard Hospital. Miss Hanselman resigned following the announcement of her marriage. Mrs. Helen Kantner Brown and Mrs. Janet Porter Nims have announced the birth of daughters. Announcement has also been received of the marriage of Josephine Luz, a graduate of the Seattle course for dietitians.

Wisconsin Dietetic Association. "More Health from Food" was the theme of a day's program at The Milwaukee Urban League. Demonstrations, talks on foods available and valuable to low income groups, and preparation of baby feedings, constituted the program. The event was sponsored jointly by the Children's Service Association, Wisconsin Anti-Tuberculosis Association, Visiting Nurses' Association and Milwaukee County Institutions. Dorothy Belknap demonstrated the preparation of the foods, assisted by Ethel Keating, Mary Agnes Bergin and Ada B. Lothe. There was a pro-

New information on a rich and inexpensive source of dietary iron

HIGH IRON CONTENT OF MOLASSES IS OVER 80% AVAILABLE

QUICK SUMMARY

RESULTS: New Orleans molasses, known to be one of the richest food sources of iron, has now been proven to contain iron of from 80% to 97% *availability.*

HOW TESTED: (A) Chemically and biologically[1]. (B) Clinically[2].

SUGGESTED USES: For child feeding where its high calorie value plus iron content make molasses a valuable dietary asset; and to provide extra iron during pregnancy.

AVAILABLE IRON CONTENT: 0.653 mgs. per tablespoonful in Brer Rabbit Molasses—Gold Label grade. 1.078 mgs. per tablespoonful in Brer Rabbit Molasses—Green Label grade.

SUGGESTED AMOUNT: One to three tablespoonfuls daily. This may be taken plain, on bread, cereal, desserts or in milk. Physicians may vary the amount, depending on the iron need, age, condition and tolerance of the individual.

BECAUSE *availability* of iron, as well as total *content*, determines the value of an iron-supplying food, *molasses is second only to beef liver as a source of assimilable iron.*

To establish the facts as to the availability of iron in molasses made from Louisiana sugar cane, the makers of Brer Rabbit Molasses co-operated in carrying out chemical, biological and clinical research. THE MOLASSES USED IN ALL OF THESE EXPERIMENTS WAS BRER RABBIT NEW ORLEANS MOLASSES. Medicinal iron was used as the standard for comparison.

Chemical and biological tests now reported[1] show the availability of iron in Brer Rabbit Molasses to be over 90% in the Gold Label grade, in the Green Label grade over 80%.

Taste preferences for molasses differ. Brer Rabbit comes in two flavors to meet all requirements. If a dark, full-flavored molasses is desired, specify Green Label Brer Rabbit (Molasses "B" in table). If a light, mild-flavored molasses is wanted, specify Gold Label Brer Rabbit (Molasses "A" in table).

Because of its low cost and palatability, may we suggest that you recommend the use of Brer Rabbit New Orleans Molasses where a higher iron content in the dietary is desirable? Penick & Ford, Ltd., Inc., Manufacturers of Brer Rabbit Molasses, New Orleans, La.

TABLE[1]

	Total Iron mg/100 gm	Per cent availability	Available iron mg/100 gm
MOLASSES "A"*	3.2	97	3.1
MOLASSES "B"**	6.0	85	5.1
BEEF LIVER	8.2	70	5.7
OATMEAL	4.8	96	4.6
APRICOTS (*dry*)	4.1	98	4.0
EGGS	3.1	100	3.1
WHEAT	5.0	47	2.4
RAISINS (*Muscat*)	3.0	62	1.9
PARSLEY	3.2	50	1.6
BEEF MUSCLE	3.0	50	1.5
OYSTERS	5.8	22	1.3
CABBAGE	1.8	72	1.3
MUTTON	5.1	24	1.2
LETTUCE	1.5	63	0.9
SPINACH	2.6	20	0.5

*Brer Rabbit—Gold Label **Brer Rabbit—Green Label

1. Am. J. Dig. Dis. Vol. VI, No. 7 (Sept.) pp. 459-62, 1939

2. Clinical research completed. Paper being prepared for publication. Reprints of these papers will be sent physicians and nurses on request.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

nounced interest in repeating a similar event in the future.

The Wisconsin Dental Association invited the Wisconsin Dietetic Association to have an educational exhibit at its annual convention at the Schroeder Hotel. Emphasis was given the normal diet for the adult, the child, and the pregnant and nursing mother. Equivalents of the calcium in one quart of milk as well as menus for four income levels were also included in the display. "Scoring Your Daily Diet for Protective Foods" was part of the subject matter of leaflets distributed.

The Milwaukee Dietetic Association had its May meeting at the Wisconsin State Sanatorium, State San, with Doris Johnson as hostess. Susan F. West gave an interesting summary of her last summer's observations on housing in the Scandinavian countries and the British Isles.

The HEWIBS were guests of the Mirro Aluminum Company, Manitowoc, Wisconsin, in May. Prior to a tour of the plant, luncheon was served at the Manitowoc Hotel.

The Tri-State Hospital Assembly, May 1–3, Chicago, was attended by Ada Lothe, Ethel Keating, Nell Clausen, Katherine Lees, Magna Werra, Susan West, Lillian Fried, Doris Johnson and Isla Jepson. Miss Keating was chairman of the program committee for the dietitians' section. Miss Clausen and Miss West presented papers. On May 1 Miss Lothe was consultant for the food service section, an innovation at the assembly.

Ruth Robertson, formerly of St. Luke's Hospital, has accepted a position with the Junket Folks. Miss Fields replaces Miss Robertson at St. Luke's.

Announcement has been received of the marriage of Jean Usher, dietitian, Wisconsin General Hospital, to Mr. Stanley Welsh on July 1. Mr. and Mrs. Welsh will reside in Superior.

The May meeting of the Madison dietitians was held at Kronsage Hall with Beulah Dahle and Catherine Henning as hostesses. Helen Parsons gave a report of the spring meeting of the Society of Biochemists in New Orleans. The following officers were elected at the business meeting: president, Sarah Ellen Wenger; vice-president, Isla Jepson; secretary-treasurer, Eleanor Nesvig.

Mercedes Cranston, formerly of Green Bay, is now with the WPA offices in Madison.

Zonta, the international service club for women, has recently organized a branch in Madison. The following local dietitians have been invited as charter members: Isabel Palm, Barons Tea Room; Sadie Stolen, Wisconsin General Hospital; Alice Ferguson, Madison Gas and Electric Company; and Lillian Otto Fried, Ann Emery Hall.

The Council of the General Federation of Women's Clubs met at Milwaukee during the week of May 20. The chairman responsible for planning and serving the group meals and banquet chose her committee from the home economics and dietetic groups of the city.

Officers of the state association elected for 1940–1941 at the annual meeting, are as follows: president-elect, Doris Johnson; secretary, Sarah Ellen Wenger; treasurer, Breta Griem. Ethel Keating remains president.

A message from the president in the May issue of the *Dietitian* reminded the members that it is not possible for the editor to know of all the interesting work being done in the hospitals of the state, and urged the members to contribute items of general interest. She also inquired as to whether the advertisements were being carefully noted.

News From Our Advertisers and Exhibitors. *Home Economics Division, National Canners Association*, Washington, D. C., will send, upon request, to readers of this JOURNAL, "Recipes Around the Clock", a collection of recipes for the use of canned foods, and a circular entitled "Canned Food Facts for Grocers" which answers the many questions covering volume content, labels, etc. concerning canned foods.

J. B. Ford Sales Company, Wyandotte, Michigan, announces a working installation of the Wyandotte Keego Solution Strength Indicator—an electrically operated device for instantly and accurately determining and controlling the strength of dishwashing solutions. This Keego indicator is part of the dishwashing servicing equipment of Wyandotte representatives. The advantages as stated are: dishes may always be washed in a solution of proper strength, thus eliminating re-washes; anyone with normal vision can operate the device and maintain dishwashing solutions at correct

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operating strength; since dishes may always be washed in solutions of proper strength, stained and discolored dishes may be materially reduced or eliminated entirely; strength of the wash solution, use of excessive rinse water and waste of hot water may be controlled. Your local Wyandotte representative will be pleased to demonstrate this Keego indicator to readers of this JOURNAL.

Frosted Foods Sales Corporation, New York, has received the Seal of Acceptance of the Council on Foods of the American Medical Association for Birds Eye quick-frozen green peas. This is the first time the Council has granted its Seal to a quick-frozen food. Birds Eye brand quick-frozen green peas are packed in a number of plants located in different sections of the United States. Trained field representatives exercise control over the selection, cultivation and harvesting of the crops, as well as the packing and freezing operations in all plants.

General Foods Corporation, New York, announces that D-Zerta is being distributed and promoted through drug trade channels in large cities of selected areas in a test of increased market possibilities for the product. D-Zerta, while an improved product, is not new, for it has had steadily increasing sales, principally to hospitals, since its introduction in 1922. It is available in two package sizes: one containing individual envelopes of the assorted six flavors, and a larger package with 20 individual envelopes of assorted flavors, or all of one flavor. It is sweetened with saccharin and flavored and colored with carbohydrate-free ingredients, and is decidedly low in protein content.

National Dairy Council, Chicago, through *Dairy Council Digests*, reports recent published research findings which indicate that butter fat contains a substance not present in the other fats tested, and which is essential for the growth and health of young animals. This difference is not due to vitamins A, D, or E, but to a difference in the chemical constitution of the fats.

A new idea in dishwashing compound packaging, announced by *Economics Laboratory, Inc.*, makers of Super Soilax for mechanical dishwashing, is a special 1½ pound package containing exactly enough compound to fill the automatic super soilax dispenser attached to mechanical dishwashers. The new package largely eliminates the waste that formerly prevailed when employees dug into the barrel for their supply. It also provides absolute control of the compound on hand, and does away with the practice of using dishwashing compound for floor washing and other cleaning purposes.

Chicago Dietetic Supply House, Inc., in connection with labeling to comply with the new food regulation, calls attention to the fact that ingredient content and food value listing have been a necessary part of Cellu labels for more than fifteen years as they felt this information was most vital to the intelligent adaptation of Cellu foods to specific dietary uses. The law now makes it mandatory that all labels give information as to contents.

Libby, McNeill & Libby announced on July 12 the appointment of Clarence M. Walters as manager of the Purchasing Department. Mr. Walters succeeds the late Mr. C. D. Darragh. The new head of the Purchasing Department has been associated with the canning company for more than 32 years, having seen service in New York, Philadelphia, Brooklyn, and Chatham, Ontario, prior to joining the Chicago headquarters in 1922. Since 1934, Mr. Walters has been a member of the Libby executive staff.

Have You Heard?

A new all-steel completely insulated cold storage room, custom-built for all kinds of exterior or interior requirements, and in which any make of refrigeration system may be installed, is now available. The room consists of interlocking wall and ceiling panels and floor sections. The pre-insulated steel sections are marked and delivered to the building site ready for assembly. To assure low-cost maintenance of various temperatures within the room, partition walls can be installed to provide as many separate compartments as are required. This makes it possible to reserve storage space for frozen foods at lower temperatures than the rest of the room. The unique construction makes it easy to dismantle the entire room and erect it at another location without damage. Walk-in refrigerator rooms also are available for

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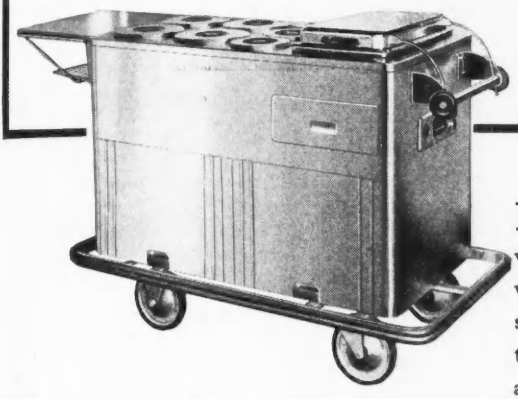
you reach your Objectives

WITH *Ideal*
FOOD CONVEYOR
SYSTEMS



- Normal moisture and palatability of food maintained by Ideal automatic temperature control. Dual lights guide attendant.
- Effortless handling of unit provided by scientific load distribution and wheel placement, assuring perfect balance.
- Absolute rigidity of top deck entirely assured by patented bridge-type assembly of food wells and heating elements.
- Easy cleaning inside and outside made possible by rounded, seamless, unobstructed corners.
- Convenient, speedy handling of trays and equipment assured by greater shelf area.
- Extra and double meat tray capacity afforded by slide-easy warming drawer which holds standard utensil.
- Smooth, rigid, all-welded body construction. Long life, good appearance.
- Full Underwriters' approval.

No need to compromise between what you want and what you can get when you use Ideal equipment. Food service with Ideal measures fully up to your most exacting theoretical standards. The essentials of perfect service are *built in* the unit, not dependent upon outside factors, hence always are constant.

Available in a wide range of prices, Ideal Conveyors also meet every budget necessity. All exclusive Ideal features are present in every unit, the price variation depends only on materials employed. Big volume production assures lowest cost and price in the industry. Years of specialization, research and engineering have developed and perfected these exclusive, valuable features at the left.

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(In writing to advertisers, please mention the journal—it helps.)

grocery stores, meat markets, restaurants, hotels, and other institutions.

➤➤◄◄

There is a new high precision geared type pressure cooker gauge which is adjustable for permanent accuracy and should be of interest to hospitals and institutions using pressure cookers in their food departments. The gauge shows both pressure and vacuum conditions.

➤➤◄◄

The Home Service Center, *Woman's Home Companion*, 250 Park Avenue, New York, has distributed a helpful folder on Ready-To-Eat Meats, such as fancy or dry sausages, fresh (cooked and smoked) sausages, prepared meat loaves, and canned meats. It lists the several varieties in each group, a description of each, the ingredients in each, their uses, suggestions for buying, appropriate methods of storage, ideas for menu combinations and methods of cooking. The folder states "One pound of large size, like bologna or loaves, makes about 18 slices on a No. 7 cutter or 24 on a No. 5 cutter. One pound of Braunschweiger yields about 36 slices on a No. 9 cutter and 52 slices on a No. 7 cutter." It also urges the purchasing of "branded, government-inspected products, for this is your guarantee of quality."

➤➤◄◄

A new machine is available which distributes an enveloping cloud of fly spray, antiseptics, disinfectants and exterminators, suitable for a variety of buildings, including assembly halls, cafeterias, hospitals and schools. The effectiveness of the new device is due to the thorough penetration of the vaporized fluid to all parts of the space in which it is operated, it is claimed. This complete spread is obtained by the injection of a fine spray into an air stream created by a motor-driven turbine fan. Vapor is emitted by two compressor-driven atomizers having nozzles projecting into the two fan outlets which direct the resulting fog from both sides of the machine, outward, upward and downward. The velocity of these currents carries the vapor to the furthermost points as the machine is moved across the floor areas. The "fog-making effect" is said to be similar to 100 hand sprays all operating at one time.

➤➤◄◄

A leading electrical concern is introducing a kitchen ventilating unit in which the blades and motor assembly are completely concealed by an attractive plastic grille which may readily be removed for cleaning purposes. Permanently installed, the new unit will remove cooking odors, fumes, and smoke quickly and quietly. Its single-speed switch is operated by means of a convenient pendant chain. When the chain is released the motor is turned on and the outside door opened. In winter weather, should the outside door be frozen in a closed position, the fan will continue to operate until the door is freed by the heated kitchen air. When the chain is pulled downward, the fan is turned off and the door closed.

➤➤◄◄

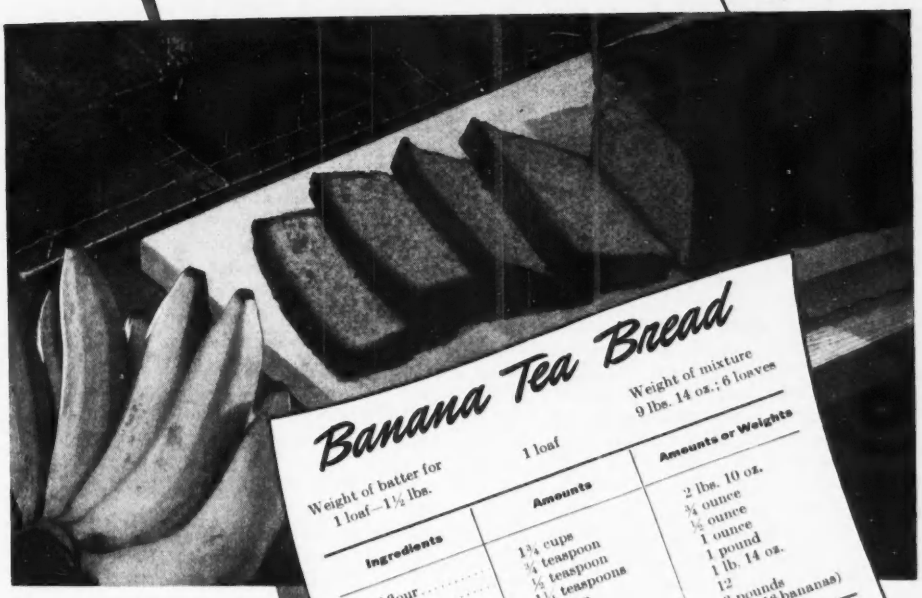
The Old-Time Tavern

I would speak of it tonight—not with the impression that might be left by the story of the old tavern-keeper up in Maine, who, the morning after his guest's arrival, asked him how he passed the night. "I did not sleep very well," replied the guest, "I was troubled with insomnia." "That's strange," replied the old tavern-keeper, with a note of anxiety in his voice, "I didn't think we had one in the house." But, rather, I would surround the subject with the spirit and atmosphere of the old couple who had walked several miles along a dusty road, and, tired and weary, at last sat down by the wayside. "I am so tired and weary," said the good wife, "that I wish this minute I was in heaven." "Well," said her better half, "I wish I was at the tavern." "That's always the way with you, Hiram," replied the wife, "you are always picking out the best place."—*Hon. Harry L. Vail, in a post-prandial talk at the banquet of Ohio Hotels Association at Hotel Statler, Cleveland. Reported in The Hotel Monthly of January 1915. The Hotel Monthly, June 1940.*

FOR THE TRAY AND THE TABLE—

Banana Tea Bread!

YOU'LL like the fruity flavor of mellow-ripe bananas in this fresh, tender bread. You'll like the way it slices and the way it toasts. And you'll find Banana Tea Bread practical and popular for both tray and dining-room service!



Banana Tea Bread

Weight of batter for 1 loaf—1½ lbs. | 1 loaf | Weight of mixture 9 lbs. 14 oz.; 6 loaves

Ingredients	Amounts	Amounts or Weights
Sifted flour	1¾ cups	2 lbs. 10 oz.
Soda	¾ teaspoon	⅜ ounce
Salt	½ teaspoon	½ ounce
Cream of tartar	1¼ teaspoons	1 ounce
Shortening	⅓ cup	1 pound
Sugar	⅔ cup	1 lb. 14 oz.
Eggs, well beaten	2	12
Mashed banana* (peeled weight)	1 cup (2 to 3 bananas)	3 pounds (14 to 16 bananas)

**For full, rich flavor, use all-yellow or fully ripe bananas*

Sift together the flour, soda, salt and cream of tartar. Cream shortening. Add sugar gradually and beat until light and fluffy. Add eggs and beat well. Add flour mixture, alternately with mashed banana, a small amount at a time. Beat after each addition until smooth. Place in well-greased loaf pans and bake in a moderate oven (350° F.) about one hour, or until bread is done.

NOTE: This banana bread has a "cake-like" texture and flavor, and could be used as a substitute for cake.

ALL MEASUREMENTS USED IN THIS RECIPE ARE LEVEL.

Banana Tea Bread is only one of the many new uses for bananas.

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WHO'S WHO IN THIS ISSUE

Mary M. Harrington, who was noted under this section for January 1940, served on the Executive Board of the American Dietetic Association for four years as chairman of the Professional Education Section, the Diet Therapy Section, and as vice-president. She has also served on numerous sub-committees and has been the Equipment Committee chairman for the past two years. She has had extensive administrative experience and for six years was metabolism and research dietitian with Dr. L. H. Newburgh at the University of Michigan Hospital. Miss Harrington has been director of dietetics at Harper Hospital for the past ten years. She has appeared on the program of the American Hospital Association and the American College of Surgeons Regional Conferences and various state and local medical society programs. In connection with the papers on the Army dietitian in this issue, it is of interest to note that Miss Harrington served under Mary Foley at the base hospital, Fort Riley, Kansas, in 1918–19. Her first assignment was in Section S which served 6000 meals per day.

Mary Pascoe Huddleson has been editor of this JOURNAL since 1927. Prior to her eighteen months war service as dietitian, Base Hospital No. 117 at La Fauche in the Upper Vosge Mountains, and Base Hospital No. 214, Savenay, France, Mrs. Huddleson lectured in New York for the Federal Food Administration.

Nell Wickliffe received the B.S. degree in home economics at Winthrop College, the South Carolina College for Women. She is a graduate of the Army School for Dietitians, Walter Reed General Hospital, Washington, D. C. Formerly staff dietitian at Walter Reed General Hospital and later staff dietitian at Station Hospital, Fort Sam Houston, Texas, Miss Wickliffe in 1934 was appointed head dietitian at Fort Sam Houston, which position she now holds. **Frances H. Boykin** holds the B.S. degree in home economics from the University of Alabama. She is also a graduate of the Army School for Dietitians, and since 1938 has served as staff dietitian at Station Hospital, Fort Sam Houston.

C. A. Elvehjem, S. Margaret Gillam, and **Martha Potgieter** were noted under this section of the JOURNAL for January 1939, and June-July 1940, respectively.

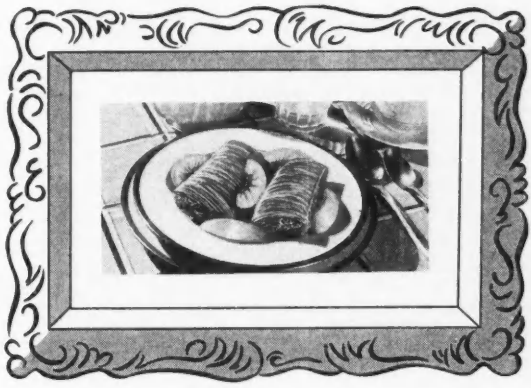
Thelma Tubbs Currier, B.S., was formerly dietitian at Peter Bent Brigham Hospital, Boston. She was also chairman of the Administration Section and the Program Committee, a second vice-president, and a member of the Journal Board, American Dietetic Association. At present Mrs. Currier is special representative, Federal Surplus Commodities Corporation, for school lunches in Connecticut and Rhode Island.

Dorothy I. Lenfest, the Association's efficient business manager since March 1930, attended Mt. Holyoke College for three years and holds the Ph.B. degree from the University of Chicago. Miss Lenfest also attended business school and prior to her present position was a librarian, and a member of the staff of the *Banker and Tradesman* at Cambridge, Massachusetts.

Alice P. Sells is executive assistant in the Office of Placement Service at Teachers College, Columbia University, in charge of placement in the following fields: home economics, mathematics, science, religious education and commercial education. She is active in the New York Wellesley Club and the American Bureau for Medical Aid to China.

Frances Livingston Hoag, B.S., M.A., Columbia University, is nutritionist for the Philadelphia Dairy Council.

K. R. Newman, B.S., M.S., is research assistant in the Food Technology Laboratory at Massachusetts State College. **C. R. Fellers**, B.S., Cornell University, and M.S. and Ph.D., Rutgers University, is research professor of food technology at the Massachusetts State College and Experiment Station at Amherst. He has been active in food research for many years, one of his main interests being a study of the effects on nutritive value of processing foods. He has published more than one hundred scientific and



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These biscuits are 100 percent whole wheat, including the *wheat germ* from which comes Vitamin B_1. Nothing is added to the whole grain, which is steam cooked and then fashioned into tender biscuits, toasted crisp in the National Biscuit ovens.

Analyses show that in two of these biscuits plus a cupful of milk the following nutrients are naturally present:

CARBOHYDRATES. Our product is 77% carbohydrates. Milk has about 5%.

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IRON. Our product is an excellent source, with .0034%. Milk has .0002%.

CALCIUM. Our product has .04%. Milk has .12%.

PHOSPHORUS. Our product has an excellent content, .42%. Milk has .09%.

VITAMIN B_1. Approximately 120 Sherman-Chase units in two biscuits. One cupful or more of milk adds approximately 77 Sherman-Chase units.

VITAMINS A and G. Our product gives these vitamins in lesser quantities. Milk is rich in both of them.

ENERGY. In two biscuits and one cupful of milk are approximately 370 calories.

Sliced peaches of course lend their good content of vitamins and minerals, rounding out a well balanced breakfast or luncheon for normal children and adults.

This agreeable blend of flavors has an appetizing appeal to adult and juvenile tastes. It is an unusually practical menu for any family or institution.

National Biscuit Shredded Wheat affords a tasty and effective form with which to encourage the intake of whole wheat and milk. With the summer fruits available at low cost, the suggested combination is extremely economical.

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technical papers on foods. For several years Dr. Fellers was with the Bureau of Chemistry and Soils and later was associate professor of food preservation at the University of Washington.

Gertrude T. Spitz holds the B.A. degree from Radcliffe College and the M.A. degree from Teachers College, Columbia University. Miss Spitz served overseas with the British Expeditionary Force during the first World War and in Geneva for eighteen months with the League of Red Cross Societies. She was formerly an assistant of Frances Stern at the Food Clinic of the Boston Dispensary and served as consultant in home economics, Family Welfare Society, Boston; assistant, Food Clinic, Massachusetts General Hospital; chief, Food Clinic, Beth Israel Hospital; and nutrition consultant for the Overseers of Public Welfare, Boston. Since 1936 Miss Spitz has done extensive lecture work and substitute teaching. At present she is nutritionist, Norwood School Project for the Massachusetts Society for Mental Hygiene. She is news editor, Harvard Unit, B.E.F. Association.

Iron Therapy

When is iron therapy indicated? The answer is, whenever there is a deficiency of iron. Clinically there are relatively few conditions in which iron deficiency occurs, but those few are important. In the first place a deficiency results if iron is lost from the body, as in conditions characterized by chronic hemorrhage. Normally the iron in the blood which is released by disintegration of the red blood cells is used again by the bone marrow; but when there is bleeding a certain amount of iron is lost to the body economy and there is a nutritive defect in the bone marrow so far as iron is concerned. In the second place there is a deficiency if the supply is inadequate . . . . the supply is deficient whenever the intake is not high enough to keep the person in positive balance. It stands to reason that, if a child is growing, the child needs iron; if a woman is losing iron through menstruation she needs iron more than if she did not menstruate; and if a woman is pregnant and is supplying iron to the fetus she needs more iron than before she was pregnant. So in the last analysis the question as to whether the intake is inadequate depends entirely on the demand.

That brings up your question . . . . as to whether an iron deficiency anemia could be produced by cutting down on the iron intake of a man who had no hemorrhages. Under those conditions a negative iron balance is rarely observed, and anemia characterized primarily by iron deficiency hardly ever occurs. What is the evidence for that? In Bellevue Hospital we have patients who have been living on coffee and rolls, or coffee and doughnuts, for one, two, three or more years. They come into the hospital with a deficiency disease, such as pellagra or scurvy, but they have practically no anemia. Although they have been on a low iron intake for a great many years, they have very little iron deficiency. So iron deficiency due to faulty ingestion is present only when there is also an increased physiologic demand for iron. Thus the usual clinical types of iron deficiency anemia are the anemias seen in growing children, menstruating women, pregnant women and bleeding patients. An iron deficiency anemia is described in women of the menopausal age, but as Heath and Patek have shown, if those patients are examined carefully they are found almost invariably to have some blood loss.—*Warren, Jr., C. O. Conferences on therapy: treatment of blood disorders, J. A. M. A., 114: 2207, 1940.*